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The articulation and educational trend for Associate and Baccalaureate nursing degrees

Beverly Joan Dunn Nelson
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THE ARTICULATION AND EDUCATIONAL TREND FOR ASSOCIATE AND
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Iowa State University

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The articulation and educational trend for
Associate and Baccalaureate nursing degrees

by

Beverly Joan Dunn Nelson

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY

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Major: Industrial Education (Industrial
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Iowa State University
Ames, Iowa

1981

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TABLE OF CONTENTS

	Page
CHAPTER I. THE PROBLEM	1
Introduction	1
Review of the Literature	3
Need for the Study	7
Problem of the Study	9
Purpose of the Study	10
Objectives of the Study	11
Statement of Hypotheses	12
Assumptions	12
Limitations	13
Methodology	14
Terminology	17
CHAPTER II. REVIEW OF THE LITERATURE	18
Introduction	18
Historical Overview of Nursing Education	19
Preparation for Associate Degree and Baccalaureate Degree Nursing	30
Research Related to Nursing Education	39
Summary	46
CHAPTER III. METHODOLOGY	48
Overview of the Design and Procedure	48
Questionnaire Development	52
Data Collection	58
Data Analysis	58

	Page
Analysis Format	62
Summary	66
CHAPTER IV. RESULTS	71
Introduction	71
Objective One	73
Objective Two	97
Objective Three	110
Objective Four	116
Objective Five	121
Articulation Activities: Importance and Implementation	124
Hypothesis I	124
Hypothesis II	142
Hypothesis III	145
Hypothesis IV	157
Hypothesis V	163
Hypothesis VI	165
CHAPTER V. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS	168
Discussion	168
Conclusions	170
Implications	180
Recommendations	181
Summary	184

	Page
REFERENCES	186
ACKNOWLEDGMENTS	193
APPENDIX A: QUESTIONNAIRES	194
Associate Degree Questionnaires	194
Baccalaureate Degree Questionnaires	197
APPENDIX B: LETTERS	204
First Letter to Colleges	204
Second Request Letter to Colleges	206

LIST OF TABLES

	Page
Table 1. Number of state-approved schools of nursing, 1979	50
Table 2. The number and percent of program responses by state	72
Table 3. Type of student admitted to four-year nursing programs	74
Table 4. The comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: exchange program and curriculum information	78
Table 5. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: the use of public relations to keep the ADN/RN informed about the four-year nursing programs	79
Table 6. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs	80
Table 7. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: counseling service and advising are provided for ADN/RN graduates who desire to enter	81
Table 8. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: conduct articulation meetings on area community college basis	82
Table 9. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: foster professional development conferences for faculty from community colleges and universities	83
Table 10. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs	85

	Page
Table 11. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize community college specialists in four-year nursing programs	86
Table 12. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop a program to identify prospective students for all career ladder levels in nursing	87
Table 13. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: provide educational programs for students with special needs	88
Table 14. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: work jointly with community colleges to identify clinical experience centers	89
Table 15. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: notify community colleges' curriculum directors of changes made in the four-year nursing program	91
Table 16. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: work jointly to provide in-service education	92
Table 17. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: invite two-year nursing instructors and counselors to visit four-year nursing instructors	93
Table 18. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: send pertinent information to students' former instructors	94
Table 19. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: provide in-service education for two-year nursing instructors by four-year nursing instructors	95

	Page
Table 20. Admission criteria for acceptance of Associate Degree Nursing/Registered Nurses into Baccalaureate Nursing programs by number and percent	98
Table 21. Credits required and accepted from each of the academic courses for Associate Degree Nurse/Registered Nurse students to complete a Baccalaureate Degree in nursing	100
Table 22. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: have identified competencies needed by ADN/RN students to enter the four-year nursing programs	101
Table 23. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: encourage core curriculum in two-year programs to enhance the articulation process with four-year programs	103
Table 24. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: provision for testing out of courses offered in the third and fourth year curriculum	104
Table 25. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop an advanced curriculum that is flexible to allow for variations among students	105
Table 26. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum	106
Table 27. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs	108

	Page
Table 28. The number of registered nursing students attempting to receive advanced placement and the number actually receiving advanced placement by year reported	111
Table 29. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: follow-up placement of two-year and four-year nursing graduates	113
Table 30. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop a communication procedure with community college counselors	114
Table 31. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: determine educational needs through community survey and other available information	115
Table 32. The methods used by Baccalaureate Degree programs to provide advanced placement	117
Table 33. Baccalaureate Degree programs reporting time saved in semesters by taking advanced placement tests	119
Table 34. Baccalaureate degree programs reporting common problems encountered by the students as they sought advanced degrees in nursing	121
Table 35. Baccalaureate degree programs reporting classes offered at nontraditional hours	122
Table 36. The mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities of the Associate Degree and Baccalaureate Degree respondents	125
Table 37. The mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities of the Associate Degree respondents as compared to the minimum acceptable level of 5	147

	Page
Table 38. The mean, standard deviation and two-tailed student t test for importance and implementation activities for the Baccalaureate Degree respondents as compared to the minimum acceptance level of five	153
Table 39. The academic level of preparation	158
Table 40. Chi-square values for respondents by position	160
Table 41. The years of nursing practice of the Associate Degree and Baccalaureate Degree respondents	163
Table 42. Chi-square values for years of nursing practice	164
Table 43. The years of teaching experience of the Associate Degree and Baccalaureate Degree respondents	166
Table 44. Chi-square values for years of teaching experience	167

CHAPTER I. THE PROBLEM

Introduction

Nursing education is on the threshold of an exciting future. New medical research ideas, exploration, innovation and experimentation must be the focus of nursing education. Unquestionably, the progressive movement of nursing education out of hierarchical hospital organizations and into educational academic settings has enhanced this needed emphasis. Changes in nursing education are also an indication of the degree to which nursing has become integrated in the mainstream of higher education because such changes are representative of those occurring across the educational spectrum. Most of the educational practice associated with the current nontraditional movement are not new; they have been practiced somewhere and sometime in the past. The difference is the extent to which they are now being combined and practiced in various educational settings. Some of the approaches currently practiced in nursing education may include: career ladder, open curriculum, challenge examinations, awarding credit for experience, independent learning centers, College Proficiency Examinations Programs, and Competency-Oriented Delivery Systems. Many of these are of major importance to the mobility process of Registered Nurses who aspire to achieve Baccalaureate status.

Although there are conflicting opinions about the various nursing levels, probably the most controversial is that between the Associate Degree programs and the Baccalaureate programs. This has been made even

more an issue by resolutions passed in 1976 by the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing and in 1978 by the American Nurses' Association.

Each of these bodies accepted a position which originated with a resolution by the New York Nurses' Association to make the Baccalaureate Degree the level at which nurses initially enter professional practice: the operational date for this change was to be 1985. However, this resolution does not have the same meaning for everyone. Bullough (1979, p. 325) stated that some educators conceptualize the term "baccalaureate" and "professional" as applying only to graduates of generic baccalaureate programs. Others, including the American Nurses' Association House of Delegates, look upon alternative pathways as legitimate routes to enter professional practice. A resolution also passed in 1978 by the ANA urged nurses to actively support high quality career mobility programs that use flexible approaches to assist individuals who ultimately seek academic degrees in nursing.

Very little has been done to learn how this process is being carried out, if, in fact, it is. The Associate Degree nursing program is expanding and the needs of this largest group of students cannot be overlooked if any long-range plan by nurse educators is to be viable for comprehensive professional preparation of future nurses.

Review of the Literature

For years, nursing educators have attempted to create a theoretical basis for nursing and a philosophically sound and socially significant form of nursing education. However, pluralism rather than uniformity has been characteristic of the changes and developments that have occurred since 1948. This has produced disagreement and controversy on both the philosophic and methodological levels. The curricular models that have emerged--licensure based, exit-reentry, advanced placement, and nontraditional forms--have been introduced, evaluated and criticized (Lenburg, 1976, p. 422). In practice, what has occurred is a continuation of the hospital schools with their particular philosophy, methods, and outcomes, contrasted with the community college's set of beliefs, practices and goals which differ, in turn, from universities and their procedures. This pluralism has resulted in a lack of a clear definition of role, levels of practice and agreement as to appropriate methods of educating students for nursing.

Among the many challenging situations in nursing education today is the one relating to the Baccalaureate Degree for the Registered Nurse. Ultimately, this degree becomes something that almost every nurse wants to earn--either as a mark of professional status, the route to advancement or a better salary, or because it just might become a requirement for Registered Nurse licensure in the future. This review of literature focused on the need that has been created by Registered

Nurses of Associate Degree Nursing programs to transfer into the curricula of Baccalaureate granting institutions.

Boatman and Huther, in Articulation in Allied Health Education (1975, p. 1) stated that mobility has long been a distinguishing feature of American society. But only in recent years has it become a characteristic of higher education which has commanded attention and concern. The number of students moving from one institution to another has steadily increased over the past decade. At the same time, the need for academic credentials in all kinds of employment has also increased. This has resulted in demands for further education by those who are already employed but seeking upward career mobility.

These developments have highlighted the problem of transferring academic credit from one institution to another. The transfer of credit may be a more intense problem in nursing education than in any other field of study. An individual may encounter the problem when he or she attempts to obtain credit for work completed in another institution or even for work completed in another program within the same institution. Still another problem a student may encounter is when he or she attempts to obtain academic credit for knowledge and skills acquired outside the traditional academic institutions. The rapidly evolving nature of the nursing profession, the shift of many training programs from hospital to educational settings, and the need for qualified faculty and supervisors with advanced training contribute to the intensity of the problem. Cheryl M. Fields, in the Chronicle of Higher Education (1980,

p. 1) supported this position by stating that unlike most academic departments these days, colleges of nursing face an undersupply--not a surplus--of people with graduate degrees willing and able to fill their faculty position.

Hoffman and Madden (1978, p..29) stated, "in higher education today, the topic of enrollment is creating concerns of greater proportion, resulting in new definitions of educational systems, in all of which nursing education is an integral part." Formalized in 1972, the Higher Education Amendments broadened the base of higher education to include public and new private institutions (proprietary, nonprofit, and sectarian) which are both within and outside the traditional public college sector, thereby, redefining "higher" education to mean "post-secondary" education. Such a movement was, in part, a response to societal pressures that called for increased mobility for students which would allow for shifts in career goals and accessibility to a variety of institutions with credit for all academic endeavors, all without penalty. Concomitant with these trends has been the gradual movement toward easier access into the post-secondary system by removal of arbitrary barriers, such as prior educational achievement.

Nursing educators, sensitive to these changing trends in post-secondary education, have also listened to the concerns within the nursing community. They have recognized the confusion of nursing service personnel who grapple with the determination of appropriate assignments for graduates from the various programs in nursing. They have also recognized the difficulties that graduates from diploma

and Associate Degree programs in nursing have experienced in their attempts to reenter the educational system in order to improve their practice and expand career possibilities. Legislators are challenging existing nursing education patterns and are engaged in legislating what they believe to be a more equitable system designed to increase mobility within nursing, as well as in the various health occupations. In California, bills have been voted into law which mandate that credit be given for previously acquired knowledge and skill.

Nursing's response to these growing pressures is heard most loudly through the proposals of curriculum reform. Core curriculum, career ladder, and open curriculum programs promise intriguing challenges for traditional admission policies and practices through which student mobility is most clearly manifested.

Muzio and Ohaski (1979, p. 528) claimed Registered Nurses without Baccalaureate Degrees constitute the largest single category of nurses in the United States today. The 67 percent whose highest credential is the diploma and the 11.3 percent whose highest credential is the Associate Degree constitute a primary repository of skill and knowledge which interfaces daily with American society and to a certain extent represents the nursing profession.

Across the nation, motivated by forces both within and outside of nursing, these nurses are seeking Baccalaureate Degrees in ever-increasing numbers. They are taking more places in generic programs than ever before, and Bachelor of Science in Nursing programs designed specifically for Registered Nurses are opening with increasing frequency.

Nevertheless, the demand still far exceeds the available resources. For many, the baccalaureate credential presents a formidable barrier to career development and mobility. Those who do break this barrier do so at great personal expense. For many talented and qualified nurses, the cost in time and money is just too great, so they leave nursing in order to achieve greater personal and career development in other occupational fields. Thus, their knowledge and skill become a resource lost to the nursing profession.

The National Commission for the Study of Nursing Education stated several propositions at the completion of its study in 1970. Among them was the following: Every nurse should be provided with continuing opportunities for career mobility, specifically including the right to extended formal education with a minimum of obstacles and a maximum of choice.

Need for the Study

The American Nurses' Association conducted a national sample survey of Registered Nurses in 1977. They learned that Registered Nurses without Baccalaureate Degrees constituted the largest single category of nurses in the United States today. Furthermore, as Registered Nurses pursued a Baccalaureate Degree, they experienced a multitude of problems and frustrations. They needed more knowledge about what was available to them. In addition, they needed to determine the facts about the opportunities and educational career ladders. Many discovered missing rungs in that ladder. Some of the barriers that have

been identified by Registered Nurses as they attempted to advance in their career goals were:

1. Basic nursing courses do not qualify RN's to enter the junior year of a four-year nursing program at colleges or universities.
2. In the process of program hunting, many RN's find information from advisors difficult to obtain without first formally applying to the college or university.
3. Nursing courses taken in an Associate Degree or diploma nursing program, even though accredited by the National League for Nursing, are not accepted without being challenged by examination or repeated at the college or university. Only general education courses are accepted automatically, provided they are equivalent to the college university courses.
4. Acceptance into many Baccalaureate Degree nursing programs is affected by the number of slots available. The individual's qualification or number of courses already completed does not guarantee priority.
5. The transferring RN student provides a problem for the department of nursing in Baccalaureate Degree programs, since each RN student has to have her/his courses reviewed before a program can be designed to fit individual needs. There seems to be no standardization of basic nursing courses to make them easily transferrable.

6. The generic nursing programs in the system lack the necessary energy to pursue their educational goals, and their fear of not succeeding within the system becomes quite real.

Without the necessary research into these problems and entrance policies as they now exist in the Midwest, educators are not fully cognizant of the magnitude of the problem. The challenge must be accepted in meeting the needs and demands of those nurses who have the right to the educational level desired and the public who have the right to the best health care that can be provided.

A Baccalaureate Degree in any field is now the minimum credential, much as the high school diploma was years ago. Nursing cannot afford to ignore these changes if it wants to retain the professional label.

Problem of the Study

This study was designed to determine the extent of articulation of the educational requirements between Associate Degree Nursing and Baccalaureate Degree Nursing programs as currently practiced in nine Midwestern states.

The existing data about this articulation process suggested that the articulation process occurred in name only, and as the Registered Nurse actually attempted to accomplish the goals of upward mobility, there appeared to be no consistency in the articulation process and no models to follow. Registered Nurses were frequently faced with a number of obstacles and oftentimes found them insurmountable.

Purpose of the Study

This study was developed to identify the practices employed in the articulation process between the Associate Degree Nursing programs and Baccalaureate Degree Nursing programs available for Associate Degree Registered Nurses to enter and complete advanced education in the field of nursing.

Some of the changes occurring in nursing and nursing education in recent years prior to this study were:

1. The majority of all nursing students are now prepared in institutions of higher education (Johnson, 1976).
2. A redefinition of nursing roles and functions (Bullough, 1975).
3. Introduction of a variety of alternatives in the education of nurses (National League for Nursing, 1973).

The major goals of the study were to:

1. Identify the entrance requirements for Associate Degree Registered Nurses to continue in their education toward a Baccalaureate Degree.
2. Determine if Associate Degree Nursing graduates are given credit for their previous education and the extent of such credit.
3. Determine the amount of repetition that is occurring in order for the nursing student to obtain an advanced degree.

4. Identify the extent to which universities have adopted an articulation procedure for admitting Associate Degree Nursing graduates into their Baccalaureate programs.
5. Determine major problems encountered in the articulation process.

Objectives of the Study

The objectives of this study were to:

1. Identify the practices employed in the articulation process model between Associate Degree Nursing programs and Baccalaureate Degree Nursing programs as being carried out at the time of this study.
2. Identify the extent to which, if any, repetition was involved in the education of an Associate Degree Nurse seeking a Baccalaureate Nursing Degree.
3. Identify the number of Associate Degree Nurses who sought advanced four-year college education.
4. Determine the length of time that could be saved by an Associate Degree Nurse achieving advanced placement to obtain a Baccalaureate Degree at each respective college.
5. Identify the major problems encountered by Associate Degree Nurses who sought advanced education.

Statement of Hypotheses

Considering the previously stated problem, the following research hypotheses were formulated:

- Hypothesis 1: There is no difference between the mean articulation scores obtained from Associate Degree programs and Baccalaureate Degree programs in nursing education within the Midwest region identified.
- Hypothesis 2: There is no difference between the Associate Degree programs' mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.
- Hypothesis 3: There is no difference between the Baccalaureate Degree programs' mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.
- Hypothesis 4: There is no difference between the academic preparation of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.
- Hypothesis 5: There is no difference between the years of nursing practice experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.
- Hypothesis 6: There is no difference between the years of teaching experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

Assumptions

In this study, the following assumptions were made:

1. It was assumed that Associate Degree Nurses are seeking advanced education in the field of nursing toward the Baccalaureate Degree.

2. It was assumed that with the current trends in nursing, especially in regard to the American Nurses' Association 1985 resolution toward a Bachelor of Science Degree for prepared professional nurses, there will be an increased shortage of qualified nurses at the Baccalaureate level.
3. It was assumed that based on the 1985 American Nurses Association resolution, with the increase in decision-making responsibilities and technical performance, the public will demand nurses with a minimum of a Baccalaureate Degree.
4. It was assumed that, as was noted in the Chronical of Higher Education (Fields, 1980), there is high priority assigned to primary faculty members and administration for new Baccalaureate programs.

Limitations

The investigation was limited to nine Midwestern states. The sample was secured from the rosters of each state that had educational institutions offering Associate Degrees and Baccalaureate Degrees in nursing. The school's selected had to meet the criteria of being approved by each respective State Board of Nursing. Another limitation of the study was created by sending questionnaires to each institution. The questionnaire technique allowed a great degree of noncompliance with filling out and returning the instrument, thereby presenting a limitation to the total representation of the articulation process.

Methodology

Survey research is descriptive, nonexperimental research used to answer a question, satisfy curiosity, solve a problem or establish a cause-effect relationship. This type of investigation is defined by some authors as covering any research not involving experimentation. Other authors limit their definition to a cross-section type of research where a large number of cases are investigated in a descriptive study. Most nursing research comes under the category of survey and is primarily concerned with finding out "what is."

The research design of the study was both descriptive and statistical. The source of data came from a questionnaire sent to two-year Associate Degree nursing programs and four-year colleges of nursing located in Iowa, Minnesota, Wisconsin, Illinois, Missouri, Kansas, Nebraska, Ohio and South Dakota.

A three-part questionnaire was designed. Part I of the instrument was to obtain biographic information about the universities that had a college of nursing. This was done so a comparison could be made between the universities that would accept Associate Degree nurses and give them college credit for what they had already accomplished and those that would not. This part of the questionnaire was sent to the Baccalaureate Degree programs.

Part II of the questionnaire was to identify selected activities that were necessary for the articulation continuum. A rating scale of one to nine was developed to measure the importance of the activity and

its level of implementation.

It was necessary for purposes of the study to establish the minimum articulation score for determining an acceptable level of articulation. A score of 5.0 was set as the minimum articulation score for determining if articulation activities existed in the two and four-year colleges by a jury of experts. The score of 5.0 was established as the minimum mean that could be expected if the articulation activities were in actuality being carried out. This part of the instrument was sent to the two-year Associate Degree programs and the four-year Baccalaureate Degree programs.

The responses to the articulation scale in Part II of the questionnaire were measured and studied in the following manner:

First, the total scores were obtained. The mean, standard deviation and a two-tailed student t test were carried out to determine if there was a difference in the articulation activity total scores obtained from the responses of the Associate Degree programs, and the Baccalaureate Degree programs.

The second measurement was the mean, standard deviation and a two-tailed student t test for determining the importance and implementation ratings of the articulation activities for each group. This was computed to determine if there was a difference in the Associate Degree programs' mean scores on the articulation scale and the established minimum articulation mean score required to be considered an acceptable level of articulation and if there was a difference in the Baccalaureate Degree programs' mean scores on the articulation score and the established mean score required to be considered an acceptable level of articulation.

The final measurement of Part II was determining the total group mean rating for each activity, both in the importance of each activity and the level of implementation. Each activity was listed by rank order of importance and rank order of implementation.

Part III of the instrument was designed to learn about the professional biography of the respondent. This part of the questionnaire was also sent to both the Associate Degree schools and the universities. It was designed to compare the professional biography of the respondents from the Associate Degree programs and the Baccalaureate Degree programs. The mean, median and chi-square test were carried out to statistically determine the professional differences in the respondents. The criteria were:

1. The highest educational degree achieved.
2. The number of years of teaching experience.
3. The number of years of nursing experience.

The reliability of the research instrument was assessed by having it enter-rated within two participating colleges. A pilot study was carried out in order to test the instrument. An adequate return was realized and sufficient evidence was obtained for the researcher to continue with the major investigation.

Terminology

For the purpose of this study, these terms should prove to be helpful to the reader:

Articulation: A planned process which facilitates the transition of students between the Associate Degree and the Baccalaureate Degree levels and makes possible the learning continuity without hindrance through levels of education.

Career Ladder: One type of open curriculum pattern and only one of the many avenues to achieve career mobility.

Open Curriculum: A broad, general term that has been used by the National League for Nursing and others in nursing to describe a variety of concepts and approaches that facilitate advanced placement or mobility in nursing education programs.

Associate Degree Nurse: An individual who has graduated from an approved two-year community college and has passed the Registered Nurse State Board examination. This type of nurse is classified as a technical nurse.

Baccalaureate Degree Nurse: An individual who has received a degree in nursing from an approved senior college or university and has passed the Registered Nurse State Board examination. This type of nurse is classified as a professional nurse.

Respondent: The college administrator who has the responsibility of responding to the survey instrument.

CHAPTER II. REVIEW OF THE LITERATURE

Introduction

The nursing profession has demonstrated a history of earnest concern for its educational programs. Just as American thought from earliest times has placed great value on the importance of an educational system to the well-being of free men, in that same spirit, nursing has invested in its educational system enormous confidence in the educational program to reform the ills of practice and to strengthen the stature of the profession. Despite this firm commitment, the picture that emerges from the review of literature on nursing education is that it has not always kept pace with the progressing needs of the profession. In recent years, the profession of nursing has been undergoing fundamental changes, and education has been slow to follow the directions of those changes. Many educators feel this trend is now changing. During the past five to six years, nursing education has shown many signs of its willingness and desire to move forward into the present, to loosen the cords of traditional nursing culture, and to integrate new attitudes, beliefs and methods into educational programs (Lenburg 1975, p. 84).

The problems associated with education and upward mobility within the nursing profession have plagued the occupation for many years. Placed in historical perspective, the problems have been focused largely on registered nurses who sought to continue their educational preparation. Once "a nurse was a nurse was a nurse," and in those times the achievement of an RN degree was a terminal goal for the vast majority of candidates.

Few individuals went on to higher educational status, and for those who did this had to be in a field other than nursing. Little or nothing was available in higher education for advanced nursing preparation. Slowly and inevitably throughout the country, the explosion of knowledge precipitated and required an increasing expectation for higher educational achievement in nursing and in other fields. These factors and the demands of RN's for education in nursing beyond the basic level justify the development of baccalaureate education in nursing within the framework of higher education.

This chapter reviews the literature related to: (1) the historical overview of nursing education, (2) the difference in academic preparation for the Associate and Baccalaureate Degree nurse and (3) the research related to nursing education.

Historical Overview of Nursing Education 1775 to 1980

Modern nursing has evolved from religious, militaristic and social backgrounds. Deloughery (1977, p. 4) stated that to understand the evolution of nursing we should understand other important developments that have profoundly conditioned and influenced its growth. Primarily these are the Crusades, the Renaissance, the Reformation, the Industrial Revolution, the development of modern science and health facilities, two World Wars, various types of research in social and basic science areas, social welfare and the Equal Rights Movement. Perhaps more important than any of these, the liberation of women served as a catalyst and critical component of the evolution of the nursing profession.

Viewed historically, the development of modern nursing seems to fall into three periods. The first period was a long preparatory one from the earliest times to the latter part of the eighteenth century. There was no special formal training or education in nursing during much of this early period. The practical experience which was received at the patient's bedside constituted the training.

The second period was identified from the latter part of the eighteenth century through the establishment of the first modern school for nurses at St. Thomas Hospital, England, in 1860 by Florence Nightingale. This period was much shorter and was marked by definite attempts at reform and at beginning actual training for those wishing to educate themselves to care for the sick.

The third period in this continuum was viewed from 1860 to the present time. It was characterized by the establishment of schools for nurses. Formal preparation included college programs, including graduate, undergraduate and Associate Degree Nursing; development of specialization in nursing; growth of nursing organizations; beginning of study and research; expanding opportunities for the graduate nurse; legislation affecting nurses and nursing; and the development of community interest in activities related to improvement of health and health care for all people in our society.

The first schools of nursing in the United States were organized on the Nightingale system. When the schools first tried to become independent under the support of committees of women, the economic problem of supporting them became too great. Therefore, the pattern in America was

for hospitals to start schools of nursing. Although nursing schools originally developed as educational institutions, they were supported and administered by hospitals, not by educational institutions. This arrangement presented a conflict. The hospitals' main focus of interest and concern was always the care of the patient, not the education of nurses. However, it was within this setting that the diploma programs, the oldest form of nursing education in the United States, developed (Deloughery, 1977, p. 152).

Hospitals, of course, welcomed the idea of training schools because such schools represented an almost free supply of nursing staff. In the early years, with outstanding exceptions, the education offered was largely of the apprenticeship type. There was some theory and formal classroom work, but for the most part, students learned by doing, providing the major part of the nursing care for the hospitals' patients in the process. Upon satisfactory completion of the program, the student was awarded a diploma by the school. The diploma was not an academic degree. In fact, because neither hospitals nor nursing programs based in hospitals are legally considered educational institutions in the mainstream of education, no academic credit can be given for any courses given by the schools' faculties. For economic, educational, and the above reasons, large numbers of diploma schools "buy" biological, physical science, or social science courses, and some liberal arts courses from community or other colleges. If these courses are part of the general offerings of the college, college credit is granted and the credit is usually transferable if the nursing student decides

to transfer to a college or continue in advanced education (Kelly, 1975, p. 173).

There are a variety of concepts of what the diploma graduate is or should be. One brief but accurate description is given by the National League of Nursing and its Council of Diploma Programs:

The diploma program in nursing prepares an individual, eligible for licensure as a registered nurse, who functions as a generalist in hospitals and similar community institutions. The nurse in these settings provides nursing care to and engage in therapeutic, rehabilitative and preventive activities in behalf of individual patients and groups of patients (NLN, 1971, p. 463).

The second form of educational program development was the baccalaureate program. The first baccalaureate program in nursing was established in 1909 under the control of the University of Minnesota, through the efforts of Dr. Richard Olding Beard. Since then, these programs have become an increasingly important part of nursing education.

The individual enrolled in a Baccalaureate Degree program in nursing obtains both a college education culminating in a Bachelor's Degree and preparation for licensure and practice as a registered professional nurse.

The program considered by the American Nurses' Association as minimum preparation for professional nursing is usually four academic years in length. Unless the college is tax-supported, with minimal tuition fees, baccalaureate nursing education is usually considerably more expensive than other basic college programs.

The Baccalaureate Degree program includes three types of courses -

general education and the liberal arts, the sciences germane or related to nursing, and technical nursing courses. In some programs the student is not admitted to the nursing major, and therefore has no nursing courses per se, until the junior year of college study. In other programs, nursing content is interwoven throughout the entire four years.

Like the other programs, the baccalaureate program has both theoretical content and clinical experience. The difference lies in the fact that, for the baccalaureate student, the courses in the physical and social sciences, for instance, will have greater depth and breadth, inasmuch as they are given on a college level. The students majoring in nursing take regular college courses in the sciences and humanities. And because the only difference between them and the other students in the college is the subject in which they are majoring, they must meet the same admission requirements and maintain the same grade level as all other students. The nursing program is an integral part of the college or university as a whole (Kelly, 1975, p. 173).

Historically, many of the early baccalaureate nursing programs were established to provide a means of career mobility for registered nurses. Graduates of hospital schools of nursing sought college degrees as a means of enhancing the quality of their nursing care, as an avenue for improving themselves, and as an approach to the advancement of nursing as a profession. In admitting these degree candidates, colleges did recognize the need to provide some form of assessment for the individual's previous education and experience. The method

utilized for awarding college credit in the period prior to 1960 was generally a system of granting a set number of blanket credits to the nurse who had completed a hospital school of nursing program and who had been licensed as a Registered Nurse. In addition, tests were sometimes, but not always, used to provide evidence of the student's competency (Dineen, 1975, p. 98).

A clear picture of the characteristics of a baccalaureate program and the students is presented by the NLN Council of Baccalaureate and Higher Degree Programs.

The baccalaureate program in nursing, which is offered by an institution in higher education, provides students with an opportunity to acquire (1) a knowledge of the developing theories and practice of nursing and the basic skills and techniques of the nursing profession; (2) a knowledge of the broad function the profession is expected to perform in society; (3) competency in selecting, synthesizing, and applying relevant information from various disciplines; (4) competency in collaborating with members of other disciplines and with the general public; (5) the ability to assess nursing needs and provide for nursing intervention; (6) the ability and motivation to evaluate current practices and try new approaches; and (7) a foundation for graduate study in nursing (Kelly, 1975, p. 171).

The third form of educational program development, and by far the greatest increase in both numbers of programs and students enrolled in them, has been the Associate Degree programs in nursing that are two years in length, offered by junior or community colleges. The first programs of this type were started in 1952 and are considered relative newcomers on the nursing education scene.

The historical development of these programs followed a logical sequence. With the advent of World War II, the supply of nurses did not meet the needs of a growing wartime population. The Cadet Nurse

Corps was established to provide more trained nurses in a shorter period of time. Once again, the emphasis was placed on nursing service needs rather than on an examination of how nursing should be taught and on the needs of the learner.

After the war, tremendous societal changes occurred. Mass communication, a developing postwar economy, the expansion of knowledge and technology, increased educational opportunities, and a changing role for women in the labor market caused upheavals in traditional patterns of American life. These changes necessitated a re-examination of prewar values and methods to determine their continued applicability and appropriateness in society. Nursing was involved in this upheaval and examination.

The Brown report (1948, p. 24), sponsored by the Carnegie Corporation, called for change in the philosophy and methodology in the preparation of nurses. The report indicated that "there was something not only drastically but chronically wrong with a system of education which could not meet the higher education demands either for qualitative or quantitative service." Experimentation was recommended: (1) to increase the contribution of hospital schools, and (2) to shorten the period of training while improving the courses of study. It was further recommended that there be an increased utilization of the resources of junior colleges.

It was not until 1952 that the Cooperative Research Project in Junior and Community College Education for Nursing at Teachers College,

Columbia University, designed a research study and a curriculum to fit into the concept and pattern of community college education. The purpose of the project was "the development and testing of a new type of program for preparing young men and women for those functions commonly associated with the registered nurse" (Montag, 1959, p. 2).

Certain assumptions were made at the outset of this project:

1. There should be differentiation among categories of nurses (technical-professional).
2. The largest number of nursing functions occurs within the semi-professional or technical category.
3. Education for nursing belongs in the mainstream of higher education.
4. The junior or community college is the logical institution for this type of technical preparation.
5. When preparation for nursing is education rather than service oriented, the time involved in preparation should be substantially reduced.

Thus, by planning a curriculum which included both general education and nursing education, Mildred Montag, as project director, challenged the philosophy, methods, and outcomes of hospital schools of nursing and gave impetus to the movement of nursing education into the higher educational mainstream. The project raised the question of nursing competence. By shortening the length of the program and providing a liberal arts component, would Associate Degree graduates practice nursing as competently as the hospital prepared nurse? (Montag, p. 4) asserted that Associate Degree graduates would be able to pass the licensing examination to practice and that they would become

competent with continued practice, rather than being competent at the time of graduation.

The Associate Degree program was the first nursing education program developed under a systematic plan and with carefully controlled experimentation. Montag conceived of a nursing technician, with nursing functions less in scope than the professional nurse and broader than the practical nurse. The curriculum was to be an integrated one, half general education and half nursing, with careful selections of educational and clinical experiences. An Associate Degree would be awarded at the end of two years. The program was considered to be terminal and not a first step toward the baccalaureate.

However, the entire concept of the Associate Degree nursing program as terminal has changed over the last twenty years, along with general societal and educational pressures for life-long learning. Obviously, no educational program should be terminal in the sense that graduates cannot continue their education toward another degree. Whether or not they get full or only partial credit for this previous education depends on the philosophy and policies of the baccalaureate program they select.

Because the catalogs of most Associate Degree nursing programs declare that they are preparing for technical nursing practice, the description of technical practice as differentiated from professional practice in the controversial ANA position paper¹ on nursing education may be helpful:

Technical nursing practice is carrying out nursing measures as well as medically delegated techniques with a high degree of skill, using principles from an ever-expanding body of science. It is understanding the physics of machines as well as the physiologic reactions of patients. It is using all treatment modalities with knowledge and precision.

Technical nursing practice is evaluating patients' immediate physical and emotional reactions to therapy and taking measures to alleviate distress. It is knowing when to act and when to seek more expert guidance.

Technical nursing practice involves working with professional nurse practitioners and others in planning the day-to-day care of patients. It is supervising other workers in the technical aspects of care.

Technical nursing practice is unlimited in depth but limited in scope. Its complexity and extent are tremendous. It must be rendered under the direction of professional nurse practitioners, by persons who are selected with care and educated within the system of higher education; only thus can the safety of patients be assured. Education for this practice requires attention to scientific laws and principles with emphasis on skill. It is education which is technically oriented and scientifically founded, but not primarily concerned with evolving theory (ANA, 1965, p. 7).

Hawes (1978, p. 5) stated that a further change in the philosophy and methodology of nursing has occurred. The University of the State of New York announced the establishment of the Regents External Degree Programs, one of which was nursing at the associate degree level. Based on the experience gained from the College Proficiency Examination Program (CPEP), a testing mechanism to grant credit for what a student knows and can demonstrate on examination, the Regents extended the concept further. The Regents External Degree Programs, patterned after the Open University in London, grant degrees through a series of comprehensive examinations, evaluations, and acceptance of transfer credit. Based on an assessment of these components, credit

is granted to those whose accomplishments are comparable to persons studying in regular college programs. The Regents External Degree Program is based on the premise that what a person knows is more important than when and where it was learned. As of September, 1975, more than 1,768 candidates were enrolled, with 26% living in 42 states other than New York. The average age of the candidates was 36 years, with 70% employed full time, primarily in health fields. In July, 1975, 69 of the eligible 87 candidates took the licensing examination in nursing, with 65 passing (94%). In the previous year, the national mean for passing the licensing examination was 88% for all programs, including Baccalaureate, and 81% for Associate Degree programs.

Thus, the past few years since World War II, some of the changes that have occurred in nursing and nursing education include a majority of nursing students who are now being prepared in institutions of higher education. Nursing roles and functions are being redefined, and a variety of alternatives in the education of nurses is being introduced.

Some of these changes are a radical departure from the traditional methods of educating nurses in the past. There exists a need to evaluate the effects of these changes on the learner and on nursing practice. It is necessary to determine how changes in educational programs have affected the quality and quantity of nursing service.

Preparation for Associate Degree and
Baccalaureate Degree Nursing

The Committee on Education of the American Nurses Association issued its Position Paper on Education Preparation for Nurse Practitioners and Assistants to Nurses which proposed that there should be only two levels of nursing education: the two-year community college program preparing technical nurses and the four-year collegiate program preparing professional nurses. That proposal has led to much controversy about nursing education preparation program outcomes. Even though all nursing programs share the same objective which is "to prepare nurse practitioners to provide a direct service to patients," they all differ in terms of length (Johnson, 1966, p. 30), curriculum and clinical experience.

Brown (1948, p. 21) stated that the task of the future for nursing was to strengthen and develop collegiate schools of nursing. R. Louise McManus, in the foreword of Mildred Montag's book, Community College Education for Nursing (1959, p. v), indicated that educational processes in nursing were no longer static and that change was occurring by design rather than by accident. While the overall goal is to improve nursing, cognizance must be given of the need to prepare greater numbers for nursing services more economically. These positions stipulate that nursing education should be offered in institutions of higher education rather than in the service-oriented environment of hospitals, the focus of diploma schools of nursing.

In 1952, Montag and McManus began junior and community college programs in nursing to prepare students in two years and qualify them for registration examinations as registered nurses. Since 1952, in an era embracing the philosophy of education for everyone, numerous junior and community college programs in nursing have been developed throughout the United States.

This new model - the Associate Degree program - was a marked change from the traditional three-year hospital program. As such, it was viewed with concern and feared by some nurses and educators. Despite the initial concern, Associate Degree education in nursing has grown rapidly. Johnson (1976, p. 570) provides data to indicate that diploma schools are declining while the number of Associate and Baccalaureate Degree programs are increasing. Bullough and Sparks (1976, p. 688) stated that more registered nurses are now graduating from community colleges than from either diploma or baccalaureate programs.

These programs, originally intended to be terminal, have become the stepping stones for nurses to acquire Bachelor of Science Degrees through transfer arrangements. A dilemma has been created in the curricula of baccalaureate granting programs as to how to deal with transfers from the junior and community colleges to professional four-year programs.

De Chow (1973, p. 107) claimed that Associate Degree graduates do not have, but require, mobility within the educational system. Bullough and Sparks (1975, p. 690) expand on this view by indicating that some

Associate Degree programs are considered terminal with no mobility to senior colleges. Not all programs hold the posture of a terminal education and many attempt to provide entry into upper division baccalaureate nursing programs. Bullough and Sparks also state the concern of some nurse educators that students who select technical preparation do not receive the equivalent technical component of the first two years or the lower division general component of the baccalaureate program.

Hallinan (1973, p. 108), in a paper presented to the Council of Associate Degree Programs of the National League for Nursing, claimed that Associate Degree programs have played and will continue to play a significant role in nursing education for the future. Channing (1973, p. 109) supports this position and asserts that by the 1980s the Associate Degree nurse will function as the primary worker in nursing, rendering quality care, working with professionals, and closing the gap now filled with less than adequately prepared auxiliary personnel such as aides, orderlies, technicians, and practical nurses. These views are consonant with Montag's purposes in initiating the Associate Degree curriculum.

In spite of having a common objective, the literature defines differences in the two levels of educational programs. Kohnke (1973) has stated that the most noticeable difference between the technical and the professional nurse is the difference in their knowledge.

In the literature on technical education, the knowledge base is described as narrow in scope, dealing primarily with the technical tasks of nursing. In the literature of professional education, the knowledge base of the professional nurse is

reported to be broad in scope, primarily theoretical, dealing with a wide range of nursing problems (Kohnke, 1973, p. 1572).

Johnson (1966, p. 33) asserted that the most noticeable difference between the technical and the professional nurse is the difference in their knowledge. The graduate of the Associate Degree or diploma program has knowledge relevant to concrete and specific patient problems and nursing action. In comparison, the Baccalaureate graduate has a relatively large fund of descriptive, explanatory and predictive knowledge, which can be applied to particular and unique patient situations. Furthermore, Johnson expects a significant difference in competence in patient care if graduates of Baccalaureate, Associate Degree, and diploma programs were compared under conditions in which each group was using its knowledge and skill to the fullest. Johnson assumed there should be a difference in nursing competence between the technical and professional nurse but did not actively engage in scientific research on this issue in a practice setting.

In order to shed some light on the controversy, Waters, Chater, Vivier, Urrea and Wilson (1972, p. 129) attempted to identify and describe some differences between graduates of Associate and Baccalaureate programs. Their study found that Baccalaureate students have a better knowledge base and are better able to make assessments and to solve problems. However, head nurses interviewed as part of the study did not necessarily cite these qualities as being important to nursing as it is practiced. Fagin, McClure, and Schlotfeldt (1976, p. 99) summed up the problem by declaring that nursing has been involved in the

struggle to operationalize the concepts of professional and technical nursing practice. Fagin concluded that the separation between the two is a theoretical construct that is not borne out in practice. Bullough and Bullough (1973, p. 1941) support this stand, but indicate that while the distinction may be logical, the politics of implementation is very difficult.

Both technical and professional nurses are expected to have skills in observation, evaluation, interpretation and implementation of nursing action. Verhonick, Nichols, Glor and McCarthy (1968, p. 32) conducted a study to gain insight into the type of observation made and actions taken by nurses in a simulated patient care situation. The findings reported that instructors and practitioners with one to six years of nursing experience made the largest percent of observations in a simulated patient situation. Furthermore, the number of observations made by nurses increased progressively with the academic degree held.

These findings by Verhonick et al., were replicated by Davis (1974, p. 151). The findings by Davis supported differences in performance between levels of nurses. One aspect of Davis' study was to compare levels of performance on a specific task in an attempt to differentiate skills possessed by clinical nurse specialists, baccalaureate nurses, and diploma nurses. The effect of education on performance was explored. The results indicated the quantity and quality of patient care provided was enhanced by increased education. Another significant finding by Davis showed that with increasing years of

nursing experience without refresher courses, the number of observations, actions taken, and reasons for the actions in a patient situation declined. Thus, regardless of educational preparation, the finding supported the need for continuing education to maintain high quality patient care.

This review of the literature on the difference in academic preparation between the Associate and the Baccalaureate Degree nurse would suggest that differences between the two levels of nurses remain controversial. The differences most commonly mentioned in the literature include the level of performance or depth of preparation, knowledge of problem solving, and leadership skills. It was agreed that educational programs and experience may assist in the acquisition of information, increasing competency in motor skills, or bringing about appropriate changes in attitudes, and it is generally assumed that changes in these factors have direct positive effects on patient care. Few studies have been carried out to definitely support this fact.

Some studies have found that nurses with higher academic degrees performed better than nurses with less educational preparation in the areas of observation, evaluation, interpretation, and identification of nursing action in a patient care situation. Indications are that more studies need to be explored in evaluating the relationship of nursing education to the performance of patient care.

Some Baccalaureate programs in nursing are admitting Registered Nurses who are graduates of diploma schools or Associate Degree nursing programs. This admission policy has raised some problems in the

articulation and matriculation process of these students within the respective curriculum. Some schools have allowed a certain amount of credit for hospital nursing programs if the student has passed the Graduate Achievement Test at a satisfactory level. How the satisfactory level is determined is not always clear. It varies from school to school. Malkin (1966) made the following comment on this problem:

There seem to be two possible solutions: (1) grant no credit for previous learning in nursing and have all registered nurses complete the same course of studies as that required of basic students in the baccalaureate program; or (2) attempt to measure their previous learnings according to baccalaureate program standards and objectives, grant subject and unit credit accordingly to determine their advanced standing, and then plan the remainder of the nursing major on the basis of each student's particular needs (Malkin, 1966, p. 36).

Kuramoto (1975, p. 30) believes the first solution discourages students, is time consuming, is not realistic, and is inconsistent with contemporary approaches to education which recognize the right of the learner to demonstrate and prove his/her knowledge and ability. The second solution allows rapid career mobility, but is more difficult, as educators must establish performance evaluation criteria.

Inconsistency of the articulation and matriculation process is the major problem. Each college determines its own policies with respect to the number and type of credits which they will accept from another institution. Many colleges will not grant credit for courses obtained in the hospital program, but will grant credit for more of the courses from an Associate Degree program. Other colleges

will not grant credits for courses taken from either program.

In the early 1960s it was not uncommon for colleges and universities to grant from thirty to sixty semester credit hours to graduates of diploma programs. Kuramoto (1975, p. 32) states these credits were referred to as "blanket credits" since they were given without evaluating the students' knowledge and skills in nursing. However, during the past decade, colleges are becoming more and more reluctant to grant credit received in diploma programs. The current trend is moving from blanket credit to the granting of credit for specific subjects on the basis of individual tests. The fact that Baccalaureate nursing programs have periodically changed their policies in respect to giving credit for previous educational experience has brought general confusion for the Registered Nursing students. For example, some schools of nursing give blanket credit for prior education and experience; other schools give no credit; and, some schools give credit by examination. This means that Registered Nurses have an opportunity to demonstrate their knowledge and skills in an examination. The proficiency examination may be either teacher-made or a standardized national examination. This form of performance evaluation allows the student to earn credit, no matter how or when their knowledge was acquired. Thus, a Registered Nurse may need to search for the most flexible Baccalaureate nursing program which meets her/his needs.

The New York College Proficiency Examination Program and other similar programs advocate the concept that the essence of a college

education is not in taking courses, but in the learning that takes place in these courses. Dr. Kurland, director of the Center of Innovation in Education of the New York State Education Department, stated:

...no individual should be required to repeat work he has already mastered; and that credit should be awarded to individuals who can demonstrate on an examination that they have attained a level of achievement equivalent to that of regularly enrolled individuals earning credit in courses (Kurland, 1966, p. 34).

Another approach to the problems of articulation and matriculation of Registered Nurses used at the University of California in San Francisco was described (Kramer, 1970, p. 794). This school of nursing first determined what students in the basic program must achieve to qualify for graduation; then it found out what each applicant seeking advanced standing had and/or still needed; and then established a program that would provide the learners with what they were lacking.

In summary, it appears that on either side of the Midwest, four-year colleges are granting college credit by passing an examination or through transfer of credit from another college. The trend is toward evaluating what the Registered Nurse is already capable of doing and what she/he needs to know to receive the BSN degree. This is an important aspect for the progress of baccalaureate education for the Registered Nurse student.

Research Related to Nursing Education

Each profession has developed its own pattern of professional education. For a time, knowledge and skills in the profession were limited enough to be passed on from one professional to others through apprenticeships. As the complexity of the American society increased, learning by trial and error and on the job training became either too dangerous or too expensive a means of supplying society with its professional people. Hence, professional education moved into the university setting where more emphasis was placed on scientific theory (Blauch, 1955, p. 3).

Nursing is one of the most recent professions to make its entry into the mainstream of college and university education. The research in nursing education has also been slow to evolve but is now beginning to become a significant part of the profession.

The issue of the difference between technical and professional nursing was researched by a nursing educator. Moore (1966, p. 68) isolated certain characteristics of nursing care which might be assumed to differentiate among the practices of Baccalaureate, Diploma, and Associate Degree graduates, and had nursing educators determine the extent of differences among the nursing programs. Thirty-two behavioral characteristic items relating to nurse practice activities involving judgment, responsibility, and leadership were developed and incorporated into a questionnaire. The results of the instrument indicated that there were definite differences existing among the programs. Those

differences most commonly mentioned included level of performance or depth of preparation, knowledge of problem solving, educational background, and leadership skills. Items which seemed to differentiate most clearly among the different types of nurses were those which related to leadership or management activities.

Mobley (1971) investigated nurse-faculty perceptions of articulation, career ladder, and open curriculum in nursing education. She explored variations in perception as influenced by such variables as type of employing institution, age, level of educational preparation, type of basic preparation in nursing, and membership in the American Nurses' Association and the National League for Nursing. The sample comprised a total of 464 nurse-faculty members from Baccalaureate and Associate degree programs located in the southern region of the country. The investigator developed a questionnaire to elicit general subject information, perceptions about the system of nursing education relating to articulation, career ladders, and open curricula, and perceptions of the most serious problems confronting nursing education.

In the study abstract, Mobley (1971, p. 79) lists the following major findings:

1. Nurse-faculty in the southern region do hold distinct and identifiable perceptions of the systems of nursing education.
2. Generally, nurse-faculty perceived the system of nursing education as inadequate in meeting the health care needs of society, in providing for educational and career mobility, and in the kind and amount of communication between its educational components.

3. A majority of the participants believed that effort should be directed toward achieving articulation between the components of the nursing education system. However, nurse-faculty employed in baccalaureate programs in nursing and those who had achieved doctoral level preparation evidenced less agreement than those faculty employed in junior college programs and those whose educational preparation was less than the Master's Degree.
4. Generally, nurse-faculty believed that the ladder concept is functional for nursing curricula. However, there was less agreement evidenced by those faculty employed in junior college programs.
5. There was agreement by the participants that the system of nursing education should develop open curriculum plans in nursing, utilizing techniques which would assess previous learning and experience. Greater agreement was evidenced by those nurse-faculty who had achieved doctoral level preparation in contrast to those faculty who had achieved the level of baccalaureate preparation.
6. Variables such as the participant's type of employing institution and the level of educational preparation in nursing effected significant differences in certain perceptions of the system of nursing education in relation to articulation, career ladders, and the open curriculum in nursing.
7. Variables such as the participant's age, type of basic educational preparation in nursing, number of meetings attended, membership in the National League for Nursing, and membership in the American Nurses' Association effected little difference in certain perceptions of the system of nursing education in relation to articulation, career ladders, and the open curriculum in nursing.

A model career ladder nursing curriculum was developed by Tashjian (1971, p. 84). She emphasized a planned, sequential education from the Associate to the Baccalaureate Degree level with a core curriculum for those in the health occupations at the Associate Degree level. Her basic premise is that lower-division nursing content is both preparatory for technical nursing and foundational for professional

nursing, making it either terminal or transferable in nature. The model she developed consequently provides for either vertical career mobility from the technical to professional level or lateral mobility within the health care disciplines.

After development of the model, three specific questions were investigated in relation to it. First, is the model validated by concepts appearing in the literature? Second, should the model be endorsed in its substance by experts in the fields of nursing and other health occupations? Third, is the model acceptable to administrators in nursing education who would have influence on its implementation?

The model was acceptable to over 50% of the respondents. Most items on the response form received more than 80% acceptance. Major aspects of the model included a function competency spectrum in nursing, a diagram of a career ladder for nursing education, a definition of terms, implications, guidelines for curriculum development, suggested courses for the model, and regional functions and relevant competencies.

She proposed separate licensing examinations, one for safety and practice at the completion of the Associate Degree level and another for professional practice at the conclusion of the Baccalaureate Degree program. The two requisite legal titles would be RTN for the Registered Technical Nurse and RPN for the Registered Professional Nurse.

Gordon (1972, p. 52) explored the current philosophies, practices, policies, and problems in accredited programs in New York, New Jersey,

and Pennsylvania that lead to a Baccalaureate Degree in nursing for Registered Nurses. She collected interview data from the twenty-seven Baccalaureate nursing programs in the geographic area. A wide range of variables was studied, including the following: admission criteria; transfer of credit; challenge of nonnursing and nursing courses; nursing courses taken by Registered Nursing students; transition from technical to professional nurse; regulation to personal or social life or both; strengths; weaknesses, and problems in the programs; student satisfactions and dissatisfactions with the programs and with Baccalaureate education in general; the relationship between basic Baccalaureate and Registered Nursing students; advantages and disadvantages in having one Baccalaureate program; and the philosophies of education of the Registered Nursing student on which the programs are based.

The twenty-seven participating schools were all generic Baccalaureate programs that admitted basic and Registered Nursing students to one program; none were for Registered Nurses only. Sixteen of the programs used different evaluative procedures to admit basic and Registered Nursing students. Past records were used more often to evaluate Registered Nurses, whereas tests were more commonly used to evaluate basic students for admission into the program. All the programs accepted transfer credit from other institutions of higher learning. Twenty-four of the schools accepted transfer credit for nursing courses from Baccalaureate Degree programs; ten schools accepted transfer credit for nursing courses in Associate Degree programs.

Only one program in the study did not use challenge examinations as one means of awarding credit. Only two did not offer challenge examinations in the nursing courses. Thirteen schools included some version of a clinical examination in challenging nursing courses. Six other programs expressed the intention to do so. In nineteen schools, the Registered Nursing and basic curriculum were identical; however, seven schools offered at least one course for the Registered Nurse only. Few programs offered specific courses to assist the Registered Nurse in the transition from technical to professional orientation within nursing practice.

Seventeen schools expressed the view that having Registered Nursing and basic students in a single program was advantageous. Flexibility and individualized instruction seemed to be major strengths of these programs.

Among the problems mentioned were the counseling time required by Registered Nursing students, lack of student financial aid, hardships imposed on students by conflict in class schedules and other responsibilities, program planning for part-time students, and limited availability of clinical facilities.

New learnings and acquiring the degree were perceived to be student satisfactions while repetition of cognitive material and clinical experiences were perceived as student dissatisfactions. Students also were unhappy about having to take challenge examinations for past learnings.

Squires (1974) conducted a research study to explore difficult

educational avenues for the Registered Nurse student. The Registered Nurse who is continuing formal education for a Baccalaureate Degree was described as a different kind of student from the typical undergraduate student.

She is older, more highly motivated and brings a wider variety of experience and educational backgrounds. She also has the problem of an adult facing faculty who may be younger and less experienced than she; they may be her peers in practice but her teachers in the academic setting. She may have other major responsibilities such as family and financial obligations to occupy her time and concerns. She may have already established her career goals and made a variety of commitments in her professional life (Squires, 1974, p. 8).

Raderman and Allen (1974, p. 73) conducted a study to characterize the Registered Nurse who elected to continue her education and obtain a Degree of Bachelor of Science in Nursing.

The investigators collected data from the academic records of 97 students. These subjects formed two groups:

1. Sixty-four students obtained the BSN degree and were recognized as the "successful group."
2. Thirty-three students withdrew before graduating and were identified as the "unsuccessful group."

Several interesting conclusions were drawn from the study. First, factors most commonly identified as predictors of academic achievement in undergraduate nursing programs clearly distinguish between the successful and unsuccessful group of students. Those included not only the grade point average, the best predictor, but also the SAT verbal score and the National League for Nursing medical-surgical examination score; all three variables were highly interrelated. The

findings of the study did not support the opinion cited by some researchers that either personal or family responsibilities while attending school interfere with academic performance.

The second conclusion of the study was that the Associate Degree graduate was more likely to complete a baccalaureate program than the diploma school graduate. Since the typical Associate Degree schedule usually transfers one year of liberal arts credits, it was fairly obvious that she/he would be able to complete a Baccalaureate education in less time than the diploma school graduate.

Summary

In summary, despite the controversy over roles, preparation, and scope of practice, technical nurses are seeking career mobility and applying to Baccalaureate programs, using whatever means available--challenge examination, transfer of general education credit, or repeating course work. Confusion is compounded since all nursing graduates regardless of their educational curricula preparation--diploma, Associate Degree, and Baccalaureate--are required to take the same licensing examination. In addition, many employers view a Registered Nurse as one who can perform certain prescribed tasks. No differentiation is made with respect to the kinds of preparatory programs graduates have attended nor the kinds of roles and responsibilities they are able to assume in practice settings. Unquestionably, social, economic, educational and legislative trends point to a need for educational flexibility without the sacrifice of quality. Those educational

programs that resist these inevitable trends (which, when properly implemented, utilize the knowledge and skills of learners and build on them) may find that they must yield to the ultimate force of threatened financial support of their programs. Furthermore, whether the public will continue to support these programs that do not recognize and meet their needs for occupational preparation is questionable.

The primary point to be considered is that changes in educational opportunities, nursing or otherwise, can be initiated by those within the system (educators) or outside the system (public pressure groups). The wiser choice would seem to be for nurse educators to study deliberately the specific needs for change within their particular settings and to initiate actions appropriate to their findings.

CHAPTER III. METHODOLOGY

Overview of the Design and Procedure

The purpose of this chapter is to describe the methods and procedures carried out in the study. The decision to study the articulation and educational trends for Associate Degree and Baccalaureate Degree nursing programs was based on the investigator's experience in nursing education and the observation that Associate Degree nurses are seeking upward mobility and want to enter and complete advanced education in the field of nursing.

The population

The design of the study included a descriptive questionnaire to research the questions related to the articulation process for Associate Degree nurses in the Midwest. The study was divided into four phases. The first task of the initial phase was to identify the population that would be included in the study. Two-year institutions that offered Associate Degree programs in nursing and four-year institutions that offered Baccalaureate Degree programs in nursing that were located in the nine Midwest states were selected. Since the task of studying all of the Midwestern states would be too difficult to be studied with any degree of satisfaction, it was decided to limit the number of states to those that were in close proximity to Iowa and to those which had made contributions to nursing research. Nine located in the desired geographic area were identified as having universities that offered

nursing programs. The states included in the study were: Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota and Wisconsin.

The second phase of the study was to contact the Iowa Board of Nursing to seek their cooperation in providing access to their records. This was done in order to secure the address of each State Board of Nursing in the nine states that had been identified. The Iowa Board of Nursing responded immediately with the requested information.

A letter was sent to each of the nine states in the study to acquaint key personnel with the nature and scope of the study. It explained the purpose of the research study and requested the names and addresses of the institutions that offered Associate Degree and Baccalaureate Degree programs in nursing that were accredited by their respective State Boards of Nursing. The response rate was 100%. Each state responded by sending the names and addresses of the universities accredited by them to offer nursing programs. Words of encouragement were offered and comments were made that a study of this type would be worthwhile and would contribute to the literature on nursing research and education.

Each Board of Nursing submitted a complete list of the schools of nursing located in their respective states. The information included the name and address of the Associate Degree, Diploma and Baccalaureate Degree nursing programs that were approved by each state to educate individuals in the profession of nursing. Table 1 is a summary of the data obtained. The third phase of the study was to design a questionnaire and test its reliability. This was accomplished and a pilot study was

Table 1. Number of state-approved schools of nursing, 1979

State	Hospital diploma	Associate Degree	Baccalaureate Degree
Illinois	30	33	19
Iowa	9	14	11
Kansas	4	12	8
Minnesota	4	12	9
Missouri	12	16	6
Nebraska	5	2	5
Ohio	31	25	13
South Dakota	2	3	3
Wisconsin	8	10	9
TOTALS	105	127	83

completed by the nursing programs in the State of Iowa. The final phase of the study was contacting the schools of nursing in the nine-state area.

The sample

Two samples of nursing program administrators were included in the study. One sample consisted of 127 schools of nursing that offered an Associated Degree in nursing. The second sample consisted of 83 schools of nursing that offered a Baccalaureate Degree in nursing. The criteria for the sample selection were:

1. Group I - Two-year institutions that offered an Associate Degree in nursing.
2. Group II - Four-year institutions that offered a Baccalaureate Degree in nursing.
3. Both groups were geographically located in the Midwest.
4. Both groups were approved by the State Board of Nursing for nursing programs in each designated state.

A total of 210 programs had been identified. The number was adequate to provide a reliable study, but not too large to become an insurmountable task. It was determined by the researcher not to use a random sampling procedure but to include all of the schools of nursing in each of the nine states as the sample.

Kinds of information and the instrument

The data to be gathered were concerned with identifying the entrance requirements for Associate Degree Registered Nurses to continue their education, determining if Associate Degree Nursing graduates were given credit for their previous education and the amount of repetition that was occurring, identifying the extent to which universities had adapted an articulation procedure for admitting Associate Degree graduates, and the major problems encountered in the articulation process.

After a problem is identified, the important questions for the researcher are: what to measure and how to measure it. It is imperative that the instrument developed or selected for data gathering be as accurate and consistent as possible. The review of the literature did not reveal an instrument that could be selected for this exact

type of study. However, the analysis of the data in a study by Gordon (1972, p. 52) did provide evidence that the questions of that study were reliable and that some items could be adapted for the present study.

In addition, the advisors of the research project recommended the review of an articulation study completed by Byler and Williams (1977, p. 41). Their questionnaire was designed to assess the educators' perception of the importance and the level of implementation of selected activities in promoting articulation between secondary and postsecondary vocational agriculture programs. The articulation activities studied were validated by a group of current and former secondary and postsecondary vocational agriculture instructors as activities which could be implemented by secondary and/or postsecondary vocational agriculture instructors in Iowa. The instrument, with some minor modifications, was adapted for the nursing articulation study.

Questionnaire Development

The design of the questionnaire was formulated in three parts:

- I. The first section contained 25 questions prepared to elicit general biographic information about the Midwestern universities that had colleges of nursing. This portion of the questionnaire was expanded from Gordon's study (1972) in which she gathered data from eastern universities on their admission policies which lead to a Baccalaureate Degree in nursing for

Registered Nurses. The modified instrument had a wide range of variables, including the following:

1. The type of nursing program.
2. National League for Nursing accreditation.
3. Highest degree in nursing offered.
4. Type and number of students enrolled.
5. Type of financial aid available.
6. Nursing scholarships offered.
7. Nontraditional class hours offered.
8. Minimum requirements for acceptance of RN students.
9. Type of academic credit granted.
10. Policy on transfer credit from previous nursing classes.
11. Policy on advanced placement for previous experience.
- 12a. The number of nursing credits required to complete the Baccalaureate Degree.
- 12b. The number of nursing credits accepted from the ADN/RN program.
- 13a. The number of communication credits required to complete the Baccalaureate Degree.
- 13b. The number of communication credits accepted from the ADN/RN program.
- 14a. Number of social science credits required to complete the Baccalaureate Degree.
- 14b. Number of social science credits accepted from the ADN/RN program.
- 15a. Number of science credits required to complete the Baccalaureate Degree.
- 15b. Number of science credits accepted from the ADN/RN program.

- 16a. Number of humanities credits required to complete the Baccalaureate Degree.
 - 16b. Number of humanities credits accepted from the ADN/RN program.
 - 17a. Number of mathematics credits required to complete the Baccalaureate Degree.
 - 17b. Number of mathematics credits accepted from the ADN/RN program.
 - 18. Number of RN students attempting to receive advanced placement.
 - 19. Number of RN students receiving advanced placement.
 - 20. Maximum time saved by advanced placement tests.
 - 21. Problems encountered by the RN students.
 - 22. Advantage of generic and RN students in the same program.
 - 23. Difficulty anticipated with the 1985 resolution.
 - 24. Enrollment and potential problems if resolution is mandated.
 - 25. Educational opportunities mandated by each state.
- II. The second section of the instrument included 25 articulation activities that required two ratings one for the "importance" of the activity in promoting articulation, and one for "level of implementation" of the activity. This portion of the instrument was adapted from Byler and Williams (1977). A nine-point rating scale was used, and a score of five was selected as the average range that could be expected if the articulation activities were important and were being carried out. The score of 5.0 was determined as the acceptable level of importance and implementation by 10 "experts" in the field of

nursing education. The 25-item questionnaire was submitted to each individual. They were asked to complete the instrument and recommend a minimum score that, in their opinion, would be an acceptable level of importance and implementation. Based on their consensus, a score of 5.0 was adapted. The experts included a Dean of Students, an Academic Advisor, two Directors of Admission, two four-year college instructors and four two-year college instructors. The following items were included:

1. Exchange program and curricula information.
2. Use public relations to keep ADN/RN informed about the four-year nursing programs.
3. Have identified competencies by ADN/RN students to enter the four-year nursing programs.
4. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.
5. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
6. Conduct articulation meetings on area community college basis.
7. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs.
8. Foster professional development conferences for faculty from community colleges and universities.
9. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.
10. Utilize community college specialists in four-year nursing programs.

11. Follow-up of placement of two-year and four-year nursing graduates.
12. Provisions for testing out of courses offered in the third and fourth year curriculum.
13. Develop an advanced curriculum that is flexible to allow for variations among students.
14. Develop a communication procedure with community college counselors.
15. Develop a program to identify prospective students for all career ladder levels in nursing.
16. Provide educational programs for students with special needs.
17. Determine educational needs through community survey and other available information.
18. Work jointly with community colleges to identify clinical experience centers.
19. Notify community colleges' curriculum directors of changes made in the four-year nursing program.
20. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum.
21. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing instructors.
22. Work jointly to provide in-service education.
23. Invite two-year nursing instructors and counselors to visit four-year nursing instructors.
24. Send pertinent information to students' former instructors.
25. Provide in-service education for two-year nursing instructors by four-year nursing instructors.

III. The third part of the instrument was also adapted from Byler and Williams. It was designed to obtain professional biographic data of the respondents who participated in the survey. It served as a comparison of the respondents from the Associate Degree programs and the Baccalaureate Degree programs. The information solicited included:

1. Respondent's position.
2. Years of current position.
3. Highest degree held.
4. Years of teaching experience.
5. Years of nursing experience.

To further enhance the study and for the purpose of obtaining additional information on the articulation process, the project was broadened to include personal interviews. Arrangements were made to visit two four-year colleges that had nursing programs. These colleges were located in Iowa and Illinois. Each college had instituted a formal articulation process for the two-year Associate Degree graduates to continue in education to achieve the Baccalaureate Degree level. In addition to conducting the interview, the participant and another faculty member were asked to complete the questionnaire. This provided the researcher the opportunity to assess the reliability of the instrument by having it evaluated by each of the two participating colleges.

A pilot study was conducted by sending the questionnaire to the Associate Degree and Baccalaureate Degree schools of nursing in the

State of Iowa. The pilot study was a miniature trial run of the methodology planned for the major project. The purpose was to make improvements in the research project and to detect problems that needed to be resolved before the major study was attempted. This phase of the study further substantiated the reliability of the instrument.

Data Collection

Prior to data collection, approval for the utilization and protection of subjects was obtained from the University Human Subjects Review Committee. The instrument and a cover letter were mailed to all of the Associate Degree and Baccalaureate Degree of nursing in the identified nine Midwestern states Degree schools. The cover letter explained the study and the need for each school's participation. Each questionnaire had a code number so that a second questionnaire could be sent to the schools that failed to respond to the first request. Samples of these forms are found in the Appendix.

Data Analysis

In describing the articulation practice employed by Baccalaureate programs admitting ADN/RN students seeking advanced education, a number of objectives and hypotheses are presented in this section. Where statistical treatment was involved, the null hypothesis was also included.

Descriptions

Objective One: Identify the practices employed in the articulation process model between Associate Degree Nursing programs and Baccalaureate Degree Nursing programs as being carried out at the time of this study in terms of the following:

1. Type of nursing program.
2. Highest degree in nursing offered.
3. Type of financial aid available.
4. Type of nursing scholarships offered and the number of ADN/RN students receiving.
5. Advantages of generic and RN students in the same program.
6. Exchange of program and curriculum information.
7. Public relations to keep the ADN/RN informed about Baccalaureate programs.
8. Use of planned active recruitment.
9. Counseling and advisory services.
10. Conduct articulation meetings.
11. Foster professional development conferences.
12. Encourage utilization of guest lecturers.
13. Utilize community college specialists.
14. Programs to identify prospective students.
15. Educational programs for special needs.
16. Identifying clinical experience centers in conjunction with community colleges.

17. Notifying community colleges of curriculum changes.
18. Working jointly to provide in-service education.
19. Communication between two and four-year instructors.
20. Send information to students' former instructors.
21. Provide in-service education.

Objective Two: Identify the extent, if any, repetition was involved in the education of an Associate Degree nurse seeking a Baccalaureate Nursing Degree.

1. Acceptance requirements for ADN/RN students.
2. Acceptance of transfer credit.
3. Amount of credit accepted.
4. Nursing credits required and accepted.
5. Communication credits required and accepted.
6. Social science credits required and accepted.
7. Science credits required and accepted.
8. Humanities credits required and accepted.
9. Mathematics credits required and accepted.
10. Identified competencies.
11. Core curriculum advantages.
12. Testing out of courses.
13. Flexible advanced curriculum.
14. Shared curriculum revision.
15. Shared evaluation and recommendations.

Objective Three: Identify the number of Associate Degree nurses who sought advanced four-year college education.

1. Number of RN students enrolled.
2. Number of RN students seeking advanced placement.
3. Number of RN students receiving advanced placement.
4. Follow-up placement of two and four-year nursing graduates.
5. Communication procedure with community college counselors.
6. Surveys to determine educational needs.

Objective Four: Determine the length of time that could be saved by an Associate Degree nurse achieving advanced placement to obtain a Baccalaureate Degree at each respective college.

1. Previous experience.
2. State board scores.
3. Transcript.
4. Employment record.
5. Assessment of nursing care skill.
6. Interview.
7. College Entrance Examination Board/College Level Entrance Program.
8. National League for Nursing graduate Nurse Examination.
9. National League for Nursing Achievement Tests.

10. Teacher-made exams (challenge).
11. Nursing core final exams.
12. Advanced placement tests.

Objective Five: Identify the major problems encountered by Associate Degree nurses who sought advanced education.

1. Classes offered at nontraditional hours.
2. Counseling time.
3. Financial aid.
4. Class scheduling.
5. Home responsibilities.
6. Program planning for part-time students.
7. Availability of clinical facilities.

Analysis Format

Descriptions are presented in tabular form for the two-year and four-year colleges used in the study. Hypotheses I, II, and III were analyzed by the mean, standard deviations and the two-tailed Student t test. The rank order of importance and implementation was determined by the total group mean rating for each activity. Hypotheses IV, V, and VI, were analyzed by the mean, median, and Chi-square test.

Comparisons

Comparison One: How similar are the mean articulation scores obtained by the two and four-year colleges?

Null Hypothesis: $H_0: \mu_1 = \mu_2$

$H_a: \mu_1 \neq \mu_2$

There is no difference between the mean articulation scores obtained by Associate Degree programs and Baccalaureate Degree programs in nursing education within the Midwest region identified.

Comparison Two: How similar are the Associate Degree program's mean scores and the acceptable level scores?

Null Hypothesis: $H_0: \mu_1 = \mu$

$H_a: \mu_1 > \mu$

There is no difference between the Associate Degree program's mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.

Comparison Three: How similar are the Baccalaureate Degree program's mean scores and the acceptable level scores?

Null Hypothesis: $H_0: \mu_2 = \mu$

$H_a: \mu_2 > \mu$

There is no difference between the Baccalaureate Degree program's mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.

Measurements to test the three preceding null hypotheses:

1. Exchange program and curriculum information.
2. Public relations materials to keep ADN/RN informed about the four-year nursing programs.
3. Identified competencies needed by ADN/RN students to enter the four-year nursing programs.
4. Active recruitment among ADN/RN graduates to pursue four-year nursing programs.
5. Counseling and advising services.
6. Articulation meetings on a community college basis.
7. Core curriculums to enhance the articulation process.
8. Professional development conferences.
9. Guest lecturers from four-year programs.
10. Community college specialists in four-year nursing programs.
11. Follow-up placement of two and four-year graduates.
12. Provisions for testing out of courses.
13. Advanced curriculum development for flexibility.
14. Development of communication procedures between two and four-year colleges.
15. Program to identify prospective students for career ladder levels.
16. Education programs for students with special needs.
17. Community education needs determined through survey.
18. Clinical experience centers identified jointly.
19. Community college directors notified of curriculum changes in the four-year programs.
20. Two-year nursing instructors involved in four-year nursing curriculum revisions.

21. Two-year nursing instructors involved in evaluation and recommendations for four-year programs.
22. In-service education provided jointly.
23. Inviting two-year nursing instructors to help evaluate and recommend direction in four-year nursing programs.
24. Sending pertinent information to students' former instructors.
25. Providing in-service education for two-year nursing instructors by four-year nursing instructors.

Comparison Four: How similar are the academic preparations of the respondents of the Associate Degree programs and the Baccalaureate Degree Programs?

Null Hypothesis: $H_0: \mu_1 = \mu_2$

$H_a: \mu_1 \neq \mu_2$

There is no difference between the academic preparation of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

1. What is your highest educational degree?

- 1a. Bachelor's Degree
- 1b. Master's Degree
- 1c. Ph.D. Degree

Comparison Five: How similar are the years of nursing practice experience of the respondents of the Associate Degree programs and the Baccalaureate Degree programs?

Null Hypothesis: $H_0: \mu_1 = \mu_2$

$H_a: \mu_1 \neq \mu_2$

There is no difference between the years of nursing experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

1. How many years of nursing practice experience do you presently have?

Comparison Six: How similar are the years of teaching experience of the respondents of the Associate Degree programs and the Baccalaureate Degree programs?

Null Hypothesis: $H_0: \mu_1 = \mu_2$

$H_a: \mu_1 \neq \mu_2$

There is no difference between the years of teaching experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

1. How many years of teaching experience do you possess?

Summary

Since the information obtained from the research instrument was categorized in three parts, the treatment of the data was also analyzed in three parts. Therefore, the parts of the questionnaire are discussed independently and the treatment of the data in each part is specified. Statistical analyses were conducted in Parts II and

III of the study.

The purpose of Part I of the questionnaire was to obtain biographic information and to explore the current practices, policies and problems in accredited programs in the Midwest that lead to a Baccalaureate Degree in nursing for registered nurses. The survey included a combination of questionnaires and interviews. The questionnaire was employed to obtain basic descriptive information from a broad sample and the interview was a follow-up to the questionnaire responses in-depth for a small sample. The data collected were used to make a comparison between the universities that would accept Associate Degree nurse students and give them credit for what they already had accomplished and those universities that would not. A wide range of variables was studied and responses were tabulated so that conclusions concerning the data could be drawn.

Part II of the study was designed to statistically analyze the importance and implementation ratings of the articulation activities for each group. The total scores were obtained. The mean, standard deviation and two-tailed student t test were carried out to determine if there was a difference in the articulation activity total scores obtained from the responses of the Associate Degree program and the Baccalaureate Degree program. The second measurement was the mean, standard deviation and a two-tailed student t test for determining the importance and implementation ratings of the articulation activities for each group. This was statistically carried out to determine if there was a difference in the Associate Degree program's mean scores on

the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation, and also if there was a difference in the Baccalaureate Degree program's mean scores on the articulation score and the minimum articulation score required to be considered an acceptable level of articulation.

The two-tailed student t test was the statistical tool employed to analyze the data for the following reasons:

1. When a nondirectional alternative hypothesis is stated, the resulting test should be a two-tailed test because the null hypothesis will be rejected if the obtained sample mean is located in the extreme region of either tail of the sampling distribution.
2. In research comparing two groups, either group may prove superior to the other group. A two-tailed student t significance, in which both tails of the sampling distribution are considered, allows the researcher to determine the significant level of differences between two means in either direction.

The following formula was used to analyze the data:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\left[\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2} \right] \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

t = the value by which the statistical significance of the mean difference will be judged.

x_1 = the mean of the Associate Degree programs.

x_2 = the mean of the Baccalaureate Degree programs.

s_1^2 = the variance of the Associate Degree programs.

s_2^2 = the variance of the Baccalaureate Degree programs.

n_1 = the number of programs in the Associate Degree programs.

n_2 = the number of programs in the Baccalaureate Degree programs.

The final measurement of Part Two was mathematical in nature and determined the total group mean rating for each activity both in the importance of each activity and the level of implementation. Each activity was listed by rank order of importance and rank order of implementation. Rank scores used in research are often another form of continuous variable because it may be assumed that if a greater number of programs were studied, cases would fall between the ranks already assigned.

Part III of the instrument was designed to elicit professional and biographic information about the respondents from the Associate Degree and the Baccalaureate Degree programs. The information obtained was used for comparison purposes including the number of years in current position, highest educational degree, years of nursing experience, and years of teaching experience. The statistical treatment employed was to first determine the mean and the medium of each group. These data allowed the researcher to compare the measures of central tendency.

Secondly, the chi-square (χ^2) test was employed to test the difference between the Associate Degree respondents and the Baccalaureate Degree respondents. The chi-square is a nonparametric statistical test that is used when the research data are in the form of frequency counts. When the data from two independent samples are only nominal, then one may use the χ^2 test to detect significant differences between the two samples. It is used to determine whether two frequency distributions differ significantly from each other.

The following formula can be used to compute chi-square:

$$\chi^2 = \sum_{i=1}^C \frac{(f_i - F_i)^2}{F_i}$$

C = number of cells

f_i = observed frequency in any cell

F_i = expected frequency if the null hypothesis of independence holds, computed through the use of the following:

$$F = \frac{(\text{row total})(\text{column total})}{n}$$

n = total observations

This information completed the comparative study of the respondents from the two and four-year educational institutions.

CHAPTER IV. RESULTS

Introduction

In this chapter the analysis and findings of this study are presented. The similarities and differences in selected biographical and articulation variables of the Associate Degree programs and Baccalaureate Degree programs in nursing education are described. Differences appeared in both groups and are discussed according to the objectives and the hypotheses of this study.

Survey response

A careful effort was made to identify nursing programs that produced Associate Degree and Baccalaureate Degree graduates. The response from the first mailing of the research questionnaire to persons in the Associate Degree programs was 78%. This response was determined adequate. The response from persons in the Baccalaureate Degree programs to the first mailing was 53%. This response rate did not meet the expectations of the researcher, so a second mailing was carried out. The percentage of returns was increased to 74%. It would appear that the Associate Degree programs respondents were much more enthusiastic to be a part of this study. The responses are found in Table 2.

Table 2. The number and percent of program responses by state

State	Associate Degree			Baccalaureate Degree			TOTAL		
	No.	Respondents	Percent	No.	Respondents	Percent	No.	Respondents	Percent
Illinois	33	31	93.9	19	17	89.5	52	48	92.3
Iowa	14	14	100.0	11	7	63.6	25	21	84.0
Kansas	12	10	83.3	8	7	87.5	20	17	85.0
Minnesota	12	7	58.3	9	4	44.4	21	11	52.4
Missouri	16	11	68.7	6	4	66.6	22	15	68.2
Nebraska	2	1	50.0	5	4	80.0	7	5	71.4
Ohio	25	15	60.0	13	8	61.5	38	23	60.5
S. Dakota	3	2	66.6	3	3	100.0	6	5	83.3
Wisconsin	10	8	80.0	9	8	88.8	19	16	84.2
TOTAL	127	99	77.95	83	62	74.69	210	161	76.6

Objective One

Objective One was designed to identify the practices employed in the articulation process model between Associate Degree nursing programs and Baccalaureate Degree nursing programs that were being carried out at the time of this study.

The responses of the questionnaire indicated that 76.2% of the four-year colleges had provisions for admitting all three categories of students: high school graduates, transfer students and registered nurse students. A very limited percentage 8.4% accepted only high school graduates and transfer students, while 5.0% accepted only Registered Nurse students. Table 3 is a summary of the information obtained from the respondents.

The study identified four-year institutions that had been accredited by the National League for Nursing. The respondents indicated 74% had accreditation for the Baccalaureate and Master's Degree nursing programs and 26% did not. The National League for Nursing does not accredit programs beyond the Master's level. The quality of a doctoral program is dependent on many factors and is related to the character of the university and its graduate school. Hence, programs vary from one institution to another.

All of the universities contacted offered a Baccalaureate Degree in nursing. Of the 62 institutions responding, 17 offered a Master's Degree in nursing and two offered a Doctor's Degree in nursing. The limited number of doctoral programs was not surprising when one

Table 3. Type of student admitted to four-year nursing programs

Type of students	H.S. ^a T.S. ^c R.N. ^b	H.S. ^a T.S. ^c	H.S. ^a R.N. ^b	R.N. ^b	T.S. ^c R.N. ^b	TOTAL	%
High school graduate	45	5	1			51	86.4
Transfer student	45	5			5	55	93.2
Registered nurse	45		1	3	5	54	91.5
Percent	76.2	8.4	1.6	5.0	8.4		

^aHigh school graduate.

^bRegistered Nurse.

^cTransferred student.

considers the reality of only some twenty plus schools now offering the professional doctorate in nursing in the United States. The choice is often narrowed to a degree in a discipline other than nursing.

The financial aid available for students included federal grants, student loans and nursing scholarships. All the responses indicated some type of financial aid, with 61% of the universities reporting specific nursing scholarships. The researcher was unable to obtain the necessary information to determine the actual number of Associate Degree Registered Nurse students receiving nursing scholarships. The questionnaire returns indicated that this type of information was unavailable to the respondent and would have to be obtained from the financial or student aid office.

When asked if having generic and registered nurse students in the same program was advantageous, 88% responded positively and 22% responded negatively. Listed below are some explanations offered by those with positive responses:

1. Students stimulate others to learn.
2. Excellent for cross fertilization of ideas.
3. It is a sharing experience.
4. Teaches students respect for knowledge.
5. Helps the Registered Nurse socialize into BSN role.

Those with negative responses stated:

1. Personal and professional growth concerns are different.
2. They are different learners.

3. Maturity and experience levels are too different.

The remaining questions of Objective One were studied by using the two-tailed student t test. The test was carried out to analyze the difference between the Associate Degree program respondents' mean scores and the established minimum mean score of 5.0 as determined by the committee of experts. The Baccalaureate Degree respondents' mean scores were measured by using the same criteria.

The minimum acceptance level of 5 was represented by the Mu (μ) in the following formula:

$$t = \bar{x} - \mu$$

$$\frac{\overline{sx^2}}{N}$$

A table of statistical results will precede each of the remaining questions of Objective One. The abbreviations and symbols that will be used in each of the tables are as follows:

Assoc - Associate Degree Nursing respondents

Bacca - Baccalaureate Degree Nursing respondents

Imp. - Importance

Impl. - Implementation

S.D. - Standard deviation

t - Two-tailed student t test

p - Probability

Program information

The statistical analyses of the Associate Degree respondents' ratings of "exchange program and curricula information" on importance, when compared with the minimum acceptance level of 5.0, resulted in a significant difference ($t = 16.11$, $df = 94$, $P < .01$). The test for implementation level resulted in a significant difference ($t = -2.21$, $df = 89$, $P < .05$). However, the mean of 4.433 was less than the minimum acceptance level.

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 13.40$, $df = 54$, $P < .01$). They rated the implementation level as meeting the minimum acceptance level.

Both groups rated the activity as more important than the minimum acceptance level of 5.0 as evidenced by the higher mean scores. The two groups differed from the minimum acceptance level in how they believed the activity was being implemented. The Associate Degree respondents had a lower mean score and rated implementation as unsatisfactory. The Baccalaureate Degree respondents rated implementation as satisfactory even though the mean score was slightly lower than minimum acceptance level. The data are summarized in Table 4.

Public relations

The Associate Degree respondents rated "the use of public relations to keep the ADN/RN informed about the four-year nursing programs" as significantly different from the minimum acceptance level in importance ($t = 10.70$, $df = 93$, $P < .01$). The implementation level was

Table 4. The comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: exchange program and curriculum information^a

	Mean	S.D.	t	P
Assoc (Imp)	7.611	1.580	16.11	0.0000
Assoc (Impl)	4.433	2.436	-2.21	0.030
Bacca (Imp)	7.455	1.358	13.40	0.000
Bacca (Impl)	4.904	2.584	-0.27	0.790

^aAbbreviations used in this table and all subsequent tables are explained on page 6.

significantly different and had not met the minimum acceptance level ($t = -2.09$, $df = 89$, $P < .05$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 12.00$, $df = 54$, $P < .01$). The implementation level was being carried out at the minimum acceptance level.

Both groups rated the activity as more important and had higher mean scores than the minimum acceptance level. They differed from the minimum accepted level of 5.0 in how they believed the activity was being implemented. The Associate Degree respondents had a lower mean score and rated it as unsatisfactory. The Baccalaureate Degree respondents had a mean score slightly higher than the minimum acceptance level of 5.0 and viewed the implementation level as satisfactory. The data are summarized in Table 5.

Table 5. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: the use of public relations to keep the ADN/RN informed about the four-year nursing programs

	Mean	S.D.	t	P
Assoc (Imp)	7.106	1.909	10.70	.000
Assoc (Impl)	4.456	2.469	-2.09	.039
Bacca (Imp)	7.509	1.550	-12.00	.000
Bacca (Impl)	5.078	2.660	0.21	.834

Recruitment

The Associate Degree respondents rated "utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs" as significantly different from the minimum acceptance level in programs" as significantly different from the minimum acceptance level in importance ($t = 5.27$, $df = 88$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -5.71$, $df = 82$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 5.52$, $df = 52$, $P < .01$). The implementation level was satisfactory and met the minimum acceptance level.

Both groups had higher mean scores and rated the activity as more important than the minimum acceptance level. They differed from the minimum acceptance level in how they believed the activity was being

implemented. The Associate Degree respondents had a lower mean score than Baccalaureate Degree respondents and rated the implementation level as unsatisfactory. The Baccalaureate Degree respondents had a slightly lower mean score than the minimum acceptance level and rated the implementation level as satisfactory. The data are summarized in Table 6.

Table 6. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs

	Mean	S.D.	t	P
Assoc (Imp)	6.258	2.254	5.27	.000
Assoc (Impl)	3.490	2.401	-5.71	.000
Bacca (Imp)	6.698	2.241	5.52	.000
Bacca (Impl)	4.804	2.804	-0.49	.627

Counseling and advising

The Associate Degree respondents rated "counseling service and advising are provided for ADN/RN graduates who desire to enter" as significantly different from the minimum acceptance level in importance ($t = 15.88$, $df = 90$, $P < .01$). The implementation level was satisfactory and met the minimum acceptance level.

The Baccalaureate Degree respondents rated the same activity as significantly different than the minimum acceptance level in importance ($t = 32.17$, $df = 54$, $P < .01$). The implementation level was satisfactory and met the minimum acceptance level ($t = 6.13$, $df = 52$, $P <$

.01).

Even though both groups rated the activity as more important and had higher mean scores than the minimum acceptance level, it was apparent that the Baccalaureate Degree respondents felt the activity was of the utmost importance. Again, they both agreed the activity was meeting the minimum acceptance level, however, the Baccalaureate Degree respondents had a much higher mean score for the implementation rate. The data are summarized in Table 7.

Table 7. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: counseling service and advising are provided for ADN/RN graduates who desire to enter

	Mean	S.D.	t	P
Assoc (Imp)	7.714	1.662	15.58	.000
Assoc (Impl)	5.069	2.587	0.25	.804
Bacca (Imp)	8.527	0.813	32.17	.000
Bacca (Impl)	7.245	2.661	6.13	.000

Articulation meetings

The Associate Degree respondents rated "conduct articulation meetings on area community college basis" as significantly different from the minimum acceptance level ($t = 14.24$, $df = 90$, $P < .01$). The implementation level was significantly different and had not met minimum acceptance level ($t = 3.47$, $df = 84$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 10.10$, $df = 54$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -2.98$, $df = 51$, $P < .01$).

Both groups had higher mean scores and rated the activity as more important than the minimum acceptance level. They also agreed that the activity was not being implemented at the minimum acceptance level and had mean scores that were significantly lower than the minimum acceptance level. The data are summarized in Table 8.

Table 8. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: conduct articulation meetings on area community college basis

	Mean	S.D.	t	P
Assoc (Imp)	7.418	1.620	14.24	.000
Assoc (Impl)	3.965	2.749	-3.47	.001
Bacca (Imp)	7.218	1.629	10.10	.000
Bacca (Impl)	3.865	2.744	-2.98	.004

Professional conferences

The Associate Degree respondents rated "foster professional development conferences for faculty from community colleges and universities" as significantly different than the minimum acceptance level ($t = 9.18$, $df = 88$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -4.29$, $df = 82$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different than the minimum acceptance level in importance ($t = 5.30$, $df = 53$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -5.29$, $df = 48$, $P < .01$).

Both groups were in agreement as they rated the activity important and reported higher mean scores than the minimum acceptance level. They also agreed that the activity was not being implemented at the minimum acceptance level and reported lower mean scores than the minimum acceptance level. The data are summarized in Table 9.

Table 9. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: foster professional development conferences for faculty from community colleges and universities

	Mean	S.D.	t	P
Assoc (Imp)	7.067	2.126	9.18	.000
Assoc (Impl)	3.711	2.739	-4.29	.000
Bacca (Imp)	6.611	2.235	5.30	.000
Bacca (Impl)	3.102	2.510	-5.29	.000

Guest lecturers

The Associate Degree respondents rated "encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs" as slightly unimportant. The implementation level was significantly different and not met the minimum acceptance level ($t = -14.10$, $df = 82$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as slightly important. The implementation level was significantly different and had not met the minimum acceptance level ($t = -12.67$, $df = 45$, $P < .01$).

The Associate Degree respondents had a lower mean score and rated the activity below the minimum acceptance level. They indicated they did not believe the activity was important. The Baccalaureate Degree respondents mean score was higher than the minimum acceptance level and rated the activity as important to the articulation process. Both groups had lower mean scores than the minimum acceptance level and were in agreement that the activity, important or not, was definitely not being implemented. The data are summarized in Table 10.

Community college specialists

The Associate Degree respondents rated "utilize community college specialists in four-year nursing programs" as slightly important. The implementation level was significantly different and had not met the minimum acceptance level ($t = -18.90$, $df = 79$, $P < .01$).

Table 10. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs

	Mean	S.D.	t	P
Assoc (Imp)	4.864	2.533	-0.50	.615
Assoc (Impl)	2.157	1.838	-14.10	.000
Bacca (Imp)	5.537	2.280	1.73	.089
Bacca (Impl)	2.217	1.489	-12.67	.000

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = -2.72$, $df = 51$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -18.11$, $df = 43$, $P < .01$).

The Associate Degree respondents had a higher mean score than the minimum acceptance level and rated the activity as slightly important. The Baccalaureate Degree respondents had a lower mean score than the minimum acceptance level and viewed the activity as not important. It was not an activity that the Baccalaureate Degree respondents thought as necessary. Both groups had lower mean scores than the minimum acceptance level and were in agreement that the activity was not being implemented in the articulation process. The data are summarized in Table 11.

Table 11. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize community college specialists in four-year nursing programs

	Mean	S.D.	t	P
Assoc (Imp)	5.046	2.510	0.17	.865
Assoc (Impl)	1.875	1.479	-18.90	.000
Bacca (Imp)	4.192	2.142	-2.72	.009
Bacca (Impl)	1.682	1.216	-18.11	.000

Prospective students

The Associate Degree respondents rated "develop a program to identify prospective students for all career ladder levels in nursing" as significantly different from the minimum acceptance level in importance ($t = 6.92$, $df = 39$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -7.44$, $df = 85$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 4.03$, $df = 54$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -7.18$, $df = 48$, $P < .01$).

Both groups were in agreement as they rated the activity as significant in importance and reported mean scores higher than the minimum acceptance level. They also agreed that the activity was not

being implemented at a satisfactory level and the mean scores were lower than the minimum acceptance level. The data are summarized in Table 12.

Table 12. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop a program to identify prospective students for all career ladder levels in nursing

	Mean	S.D.	t	P
Assoc (Imp)	6.656	2.264	6.92	.000
Assoc (Impl)	3.081	2.392	-7.44	.000
Bacca (Imp)	6.273	2.345	4.03	.000
Bacca (Impl)	2.959	1.989	-7.18	.000

Special needs students

The Associate Degree respondents rated "provide educational programs for students with special needs" as significantly different from the minimum acceptance level ($t = 7.48$, $df = 86$, $P < .01$). The implementation level was significantly different and had not met the minimal acceptance level ($t = -7.16$, $df = 82$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 5.18$, $df = 53$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.43$, $df = 48$, $P < .01$).

Both groups had higher mean scores than the minimum acceptance level and rated the activity as very important. They also agreed that the activity was not being implemented at a satisfactory level and had much lower mean scores than the minimum acceptance level. The data are summarized in Table 13.

Table 13. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: provide educational programs for students with special needs

	Mean	S.D.	t	P
Assoc (Imp)	6.609	2.008	7.48	.000
Assoc (Impl)	3.386	2.053	-7.16	.000
Bacca (Imp)	6.519	2.152	5.18	.000
Bacca (Impl)	3.796	2.458	-3.43	.001

Clinical experience centers

The Associate Degree respondents rated "work jointly with community colleges to identify clinical experience centers" as significantly different from the minimum acceptance level in importance ($t = 10.67$, $df = 86$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.47$, $df = 79$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in

importance ($t = 5.23$, $df = 54$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -2.37$, $df = 47$, $P < .05$).

Both groups possessed higher mean scores than the minimum acceptance level and were in agreement as to the importance of this activity. The Associate Degree respondents mean score indicated they believed the activity was even more important than did the Baccalaureate respondents. They also agreed that the activity was not being implemented at a satisfactory level. Both groups had lower mean scores than the minimum acceptance level with the Associate Degree respondents mean score being slightly lower than the Baccalaureate Degree respondents. The data are summarized in Table 14.

Table 14. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: work jointly with community colleges to identify clinical experience centers

	Mean	S.D.	t	P
Assoc (Imp)	7.207	1.930	10.67	.000
Assoc (Impl)	3.988	2.612	-3.47	.001
Bacca (Imp)	6.546	2.193	5.23	.000
Bacca (Impl)	4.063	2.740	-2.37	.022

Curriculum changes

The Associate Degree respondents rated "notify community colleges' curriculum directors of changes made in the four-year nursing program" as significantly different from the minimum acceptance level ($t = 18.88$, $df = 85$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptable level ($t = -5.62$, $df = 79$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 9.10$, $df = 54$, $P < .01$). The implementation level was being met at a satisfactory level.

Even though both groups had mean scores that were higher than the minimum acceptance level, the Associate Degree respondent believed this activity was the most important. Both groups viewed the activity as not being implemented at the minimum acceptance level. They both possessed mean scores higher than the minimum acceptance level; however, the Associate Degree respondents rated the activity with a lower mean score. The Baccalaureate Degree respondents did not view the lack of implementation as necessary. The data are summarized in Table 15.

Table 15. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: notify community colleges' curriculum directors of changes made in the four-year nursing program

	Mean	S.D.	t	P
Assoc (Imp)	7.907	1.428	18.88	.000
Assoc (Impl)	3.313	2.684	-5.62	.000
Bacca (Imp)	7.327	1.896	9.10	.000
Bacca (Impl)	4.745	2.820	-0.65	.522

In-service education

The Associate Degree respondents rated "work jointly to provide in-service education" as significantly different from the minimum acceptance and indicated it should be carried level ($t = 6.75$, $df = 87$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -8.47$, $df = 81$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 2.03$, $df = 53$, $P < .05$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -5.31$, $df = 48$, $P < .01$).

Even though both groups had mean scores higher than the minimum acceptance level, the Baccalaureate Degree respondents did not view the activity as important as the Associate Degree respondents did. The same was true for the implementation level. Both groups had mean

scores lower than the minimum acceptable level and did not believe the activity was being implemented at the minimum acceptable level. The data are summarized in Table 16.

Table 16. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: work jointly to provide in-service education

	Mean	S.D.	t	P
Assoc (Imp)	6.671	2.323	6.75	.000
Assoc (Impl)	2.609	2.557	-8.47	.000
Bacca (Imp)	5.759	2.754	2.03	.048
Bacca (Impl)	3.020	2.610	-5.31	.000

Instructor and counselor visits

The Associate Degree respondents rated "invite two-year nursing instructors and counselors to visit four-year nursing instructors" as significantly different from the minimum acceptance level in importance ($t = 9.56$, $df = 85$, $P = .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -9.48$, $df = 76$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level ($t = 5.02$, $df = 52$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -5.15$, $df = 47$, $P < .01$).

Both groups had mean scores higher than the minimum acceptance level and were in agreement as they rated the activity as important. The Associate Degree respondents mean scores indicated they believed the activity was even more important than did the Baccalaureate Degree respondents. They also agreed that the activity was not being implemented at the minimum acceptance level. Both groups had lower mean scores than the minimum acceptable level with the Associate Degree respondents mean scores being lower. The data are summarized in Table 17.

Table 17. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: invite two-year nursing instructors and counselors to visit four-year nursing instructors

	Mean	S.D.	t	P
Assoc (Imp)	6.919	1.861	9.56	.000
Assoc (Impl)	2.416	2.392	-9.48	.000
Bacca (Imp)	6.472	2.136	5.02	.000
Bacca (Impl)	3.146	2.492	-5.15	.000

Information to instructors

The Associate Degree respondents rated "send pertinent information to students' former instructors" as slightly important as indicated by the mean score. The implementation level was significantly different and had not met the minimum acceptance level ($t = 16.92$, $df = 77$, $P < .01$).

The Baccalaureate respondents rated the same activity as slightly

unimportant and indicated it should not be carried out. The implementation level was significantly different and had not met the minimum acceptable level ($t = -8.92$, $df = 42$, $P < .01$).

The Associate Degree respondents had a higher mean score and rated the activity above the minimum acceptable level. The Baccalaureate Degree respondents mean score was lower and rated the activity below the minimum acceptance level. Neither group rated the activity as important. Both groups were in agreement and had lower mean scores than the minimum acceptance level. They did not consider this activity as important and they definitely did not consider it being implemented. The data are summarized in Table 18.

Table 18. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: send pertinent information to students' former instructors

	Mean	S.D.	t	P
Assoc (Imp)	5.356	2.668	1.25	.216
Assoc (Imp1)	1.782	1.680	-16.92	.000
Bacca (Imp)	4.776	2.953	-0.53	.597
Bacca (Imp1)	2.023	2.188	-8.92	.000

Instructor education

The Associate Degree respondents rated "provide in-service education for two-year nursing instructors by four-year nursing instructors" as significantly different from the minimum established level in importance ($t = -2.19$, $df = 85$, $P < .05$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -18.14$, $df = 79$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as slightly unimportant as indicated by the mean score. The implementation level was significantly different and had not met the minimum acceptance level ($t = -9.96$, $df = 45$, $P < .01$).

Both groups had lower mean scores than the minimum acceptance level and rated the activity as less important. They also agreed that the activity was not implemented at the minimum acceptance level as evidenced by the lower mean scores level. The data are summarized in Table 19.

Table 19. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: provide in-service education for two-year nursing instructors by four-year nursing instructors

	Mean	S.D.	t	P
Assoc (Imp)	4.349	2.760	-2.19	.031
Assoc (Impl)	1.725	1.615	-18.14	.000
Bacca (Imp)	4.654	2.883	-0.87	.391
Bacca (Impl)	2.109	1.969	-9.96	.000

Discussion of results of Objective One

Several tentative conclusions may be drawn from the analysis of the data that have been presented to answer Objective One. The practices employed in the articulation model between Associate Degree nursing programs and Baccalaureate Degree nursing programs, as being carried out at the time of this study, emerged from the data.

The number of Baccalaureate Degree nursing programs that would accept the Associate Degree/Registered Nurse student was substantial. A total of 91.5 percent of the universities surveyed indicated they had provisions for admitting ADN/RN students. The mix of generic and Registered Nurse students in the same program was seen as advantageous by 88% of the respondents.

The analysis of the data identified activities which the respondents viewed as important to the articulation process and those that had been implemented to enhance the articulation between the Associate Degree programs and the Baccalaureate Degree programs. Of the 16 activities studied for Objective One, the Associate Degree respondents viewed 14 of the activities as important. Only one of the activities had been implemented at a satisfactory level in their opinion, "counseling service and advising are provided for ADN/RN graduates who desire to enter."

The Baccalaureate Degree respondents viewed 13 of the activities as important and two of the activities as being implemented at a satisfactory level, "use public relations material to keep ADN/RN informed about the four-year nursing programs" and "counseling service

and advising are provided for ADN/RN graduates who desire to enter." These facts tended to be somewhat astounding in view of the fact that over 90 percent of the universities claimed provisions for admitting the ADN/RN students to the nursing programs.

Visits were made to two Baccalaureate Degree nursing programs located in Iowa and Illinois. Conferences held with the Directors of Admissions tended to substantiate what had been learned from the survey instrument. They agreed the articulation process between two and four-year nursing programs was important. They also agreed that the implementation was falling far short of the expected level of implementation. Both directors pointed out that the major universities did not have to be concerned about the ADN/RN seeking advanced education. They already had large enrollments with long waiting lists. They agreed that this was due to the pressures of continuing education units and the 1985 proposal. They both expressed sympathy for the ADN/RN seeking a higher level of education and believed more efforts should be extended to assist them.

Objective Two

Objective Two was designed to identify the extent, if any, repetition was involved in the education of an Associate Degree nurse seeking a Baccalaureate Degree in nursing.

The problem of identifying the repetition, if any, involved in the education of an Associate Degree nurse seeking a Baccalaureate Degree was studied. The four-year programs were questioned about

their programs' admission requirements. The admission requirement criteria for acceptance of Registered Nurse students is found in Table 20.

Table 20. Admission criteria for acceptance of Associate Degree Nursing/Registered Nurses into Baccalaureate Nursing programs by number and percent

Admission criteria	Number	Percent
Satisfactory Completion of College Courses	47	79.6
Previous Nursing School Grade Point	26	44.0
ACT	15	25.4
Satisfactory Practice Ability	12	20.3
Interview	9	15.2
State Board Results	7	11.8
SAT	5	8.4

The most important admission criterion, indicated by the Baccalaureate Degree programs, was the satisfactory completion of college courses. The large majority of four-year programs, (79.6%), indicated it was an important requirement. The second most prevalent admission criterion was previous nursing school grade point. Forty-four percent of the programs proclaimed this as a requirement. The third admission criterion indicated was the American College Test. It was unanticipated that only 25.4% used this test as an admission criterion.

The second question of Objective Two was to determine if the Baccalaureate Degree nursing program would accept credits from the Associate Degree nursing program for nursing courses already completed. Sixty-one percent of the respondents indicated that Baccalaureate Degree programs did not accept credits from Associate Degree programs, while 31% did accept credit. This fact was no surprise and further substantiated the lack of articulation being practiced at the time of the study. The number of credits accepted ranged from none to 31 and above.

The third question was designed to determine the exact number of credits required from each discipline for the Associate Degree nurse to complete a Baccalaureate Degree. The number that would be accepted by the four-year programs was analyzed and the data were summarized in Table 21.

The analysis of the data identified a major difference in the number of nursing credits required and the number of nursing credits that would be accepted from the Associate Degree Registered Nurse. Also, differences were noted in the other disciplines. In every instance, more credits were required than would be accepted from the Associate Degree nursing programs. Baccalaureate Degree respondents indicated that credit would only be accepted from Universities and Colleges and not from technical institutions.

The remaining questions of Objective Two were statistically analyzed by using the two-tailed student t test. The student t test

Table 21. Credits required and accepted from each of the academic courses for Associate Degree Nurse/Registered Nurse students to complete a Baccalaureate Degree in nursing

Required courses	<u>Baccalaureate Degree Nursing Program</u>			
	Credits required	Range	Credits accepted	Range
Nursing	73.042	15-132	9.723	0-77
Science	23.500	10- 42	15.204	0-28
Humanities	12.954	0- 31	7.545	0-24
Social Science	12.250	4- 27	9.500	0-16
Communication	7.325	0- 15	4.461	0-15
Mathematics	2.289	0- 11	1.405	0-10

was done to analyze the difference between the Associate Degree program respondents and the minimum acceptance level of 5.0 as determined by the committee of experts. The Baccalaureate Degree respondents were measured using the same criteria.

A table of statistical results precedes each of the remaining questions of Objective Two. The same abbreviations and symbols that were used in the tables for Objective One will also be used for Objective Two.

Identified competencies

The Associate Degree respondents rated "have identified competencies needed by ADN/RN students to enter the four-year nursing programs" as significantly different from the minimum acceptance level

in importance ($t = 17.94$, $df = 92$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.03$, $df = 87$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 11.08$, $df = 53$, $P < .01$). The implementation level was being carried out at the minimum acceptance level.

Both groups had higher mean scores than the minimum acceptance level and rated the activity as very important. They did not agree with regard to the implementation level of the activity. The Associate Degree respondents mean score was lower than the minimum acceptance level, indicating the activity had not met the minimum acceptance level. The Baccalaureate Degree respondents rated the activity at the minimum acceptance level, indicating they believed the implementation to be satisfactory. The data are summarized in Table 22.

Table 22. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: have identified competencies needed by ADN/RN students to enter the four-year nursing programs

	Mean	S.D.	t	P
Assoc (Imp)	7.946	1.584	17.94	.000
Assoc (Impl)	4.114	2.744	-3.03	.000
Bacca (Imp)	7.946	1.645	11.08	.000
Bacca (Impl)	5.000	2.615	0.00	1.000

Core curriculum

The Associate Degree respondents rated "encourage core curriculum in two-year programs to enhance the articulation process with four-year programs" as significantly different from the minimum acceptance level in importance ($t = 7.71$, $df = 88$, $P = .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -5.30$, $df = 85$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 6.96$, $df = 53$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -4.30$, $df = 47$, $P < .01$).

Both groups had mean scores higher than the minimum acceptance level and were in agreement by indicating the activity as important. They also agreed that the activity was not being implemented at the minimum acceptance level. Both groups had significantly lower scores than the minimum acceptance level. The Baccalaureate Degree respondents mean score was higher for importance and the lower for implementation indicating how strongly they felt about the activity. The data are summarized in Table 23.

Testing out of courses

The Associate Degree respondents rated "provision for testing out of courses offered in the third and fourth year curriculum" as significantly different from the minimum acceptance level in importance

Table 23. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: encourage core curriculum in two-year programs to enhance the articulation process with four-year programs

	Mean	S.D.	t	P
Assoc (Imp)	6.888	2.308	7.71	.000
Assoc (Impl)	3.535	2.565	-5.30	.000
Bacca (Imp)	7.111	2.339	6.96	.000
Bacca (Impl)	3.333	2.684	-4.30	.000

($t = 10.89$, $df = 84$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -2.06$, $df = 76$, $P < .05$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 12.41$, $df = 54$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = 4.33$, $df = 48$, $P < .01$).

Both groups had higher mean scores than the minimum acceptance level and rated the activity as important. They did not agree on the implementation of the activity. The Associate Degree respondents had a lower mean score than the minimum acceptance level and rated the activity as not being implemented at the minimum acceptance level. The Baccalaureate Degree respondents had a higher mean score and indicated the activity as implemented at a high level. The data are summarized in Table 24.

Table 24. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: provision for testing out of courses offered in the third and fourth year curriculum

	Mean	S.D.	t	P
Assoc (Imp)	7.482	2.102	10.89	.000
Assoc (Impl)	4.403	2.541	-2.06	.042
Bacca (Imp)	7.691	1.609	12.41	.000
Bacca (Impl)	6.612	2.605	4.33	.000

Flexible curriculum

The Associate Degree respondents rated "develop an advanced curriculum that is flexible to allow for variations among students" as significantly different from the minimum acceptance level in importance ($t = 14.97$, $df = 89$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.89$, $df = 81$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 11.21$, $df = 54$, $P < .01$). The implementation level was being implemented at the minimum acceptance level.

Both groups had higher mean scores than the minimum acceptance level and rated the activity as important. They did not agree on the implementation of the activity. The Associate Degree respondents

had a lower mean score than the minimum acceptance level and rated the activity not being implemented at the minimum acceptance level. The Baccalaureate Degree respondents had a higher mean score and indicated the activity had been implemented at the minimum acceptance level. The data are summarized in Table 25.

Table 25. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop an advanced curriculum that is flexible to allow for variations among students

	Mean	S.D.	t	P
Assoc (Imp)	7.744	1.745	14.92	.000
Assoc (Impl)	3.829	2.725	-3.89	.000
Bacca (Imp)	7.655	1.756	11.21	.000
Bacca (Impl)	5.580	2.734	1.50	.140

Curriculum revision

The Associate Degree respondents rated "involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum" as significantly different from the minimum acceptance level in importance ($t = 4.87$, $df = 87$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -13.44$, $df = 77$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as

slightly unimportant. The implementation level was significantly different and had not met the minimum acceptance level ($t = -11.21$, $df = 46$, $P < .01$).

The two groups disagreed with regard to the importance of the activity. The Associate Degree respondents had a higher mean score than the minimum acceptance level and rated the activity as important. It appears that they believed their involvement would enhance the articulation process. The Baccalaureate Degree respondents did not agree with this assumption and rated the activity with a lower mean score. Both groups did agree on the fact that the activity was not being implemented. They both had mean scores well below the minimum acceptance level. The data are summarized in Table 26.

Table 26. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum

	Mean	S.D.	t	P
Assoc (Imp)	6.329	2.563	4.87	.000
Assoc (Impl)	1.949	2.006	-13.44	.000
Bacca (Imp)	4.887	2.806	-2.29	.770
Bacca (Impl)	1.979	1.847	-11.21	.000

Program evaluation

The Associate Degree respondents rated "utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs" as significantly different from the minimum acceptance level in importance ($t = 3.69$, $df = 87$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = 015.15$, $df = 76$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as slightly unimportant. The implementation level was significantly different and had not met the minimum acceptance level ($t = -9.56$, $df = 44$, $P < .01$).

The two groups disagreed on the importance of the activity. The Associate Degree respondents had a higher mean score than the minimum acceptance level and rated the activity as importance. Again, it appeared that they believed their involvement would enhance the articulation process. The Baccalaureate Degree respondents did not agree with this assumption and rated the activity as not important as evidenced by the lower mean score. Both groups did agree that the activity was not being implemented. They both had mean scores well below the minimum acceptance level. The data are summarized in Table 27.

Table 27. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs

	Mean	S.D.	t	P
Assoc (Imp)	6.057	2.684	3.69	.000
Assoc (Impl)	1.805	1.850	-15.15	.000
Bacca (Imp)	4.679	2.607	-0.90	.375
Bacca (Impl)	2.178	1.980	-9.56	.000

Discussion of results of Objective Two

The conclusion that was formulated from the study of Objective Two is that there exists a great extent of repetition encountered by the ADN/RN seeking upward mobility in nursing education. It is also evident that the administrators of Baccalaureate Degree nursing programs are not seeking nor do they believe they need any assistance from the Associate Degree programs in curriculum development or program changes to enhance the articulation process.

When one considers that only 39% of the Baccalaureate Degree nursing programs will accept credit from nursing courses presented by Associate Degree nursing programs, it may be anticipated that in most instances a great extent of repetition will be encountered. It is noteworthy that the two groups do not agree on the provision made by Baccalaureate Degree programs for the testing out of courses. Although both groups thought it was important, the Associate Degree respondents

did not agree that it was being carried out to the established minimum level of satisfactory articulation. The Baccalaureate Degree program respondents appear satisfied with the testing provisions that have been established. While visiting the four-year institution, the researcher noted that one Director of Admissions made reference to the fact that colleges of nursing were testing far too much. She also commented that they were making it more difficult than it needed to be.

The next question to be addressed: How often must a course be taught before one can be assured the content has been assimilated? It would appear that successful achievement in the examination for licensing would be considered adequate proof of nursing knowledge. However, State Board results ranked next to the last item in admission criteria. Satisfactory completion of college courses was the most frequently used admission criterion.

The analysis of the data identified activities which the respondent viewed as important to the articulation process and those that had been implemented to enhance the articulation between the Associate Degree programs and the Baccalaureate Degree programs. Of the six activities studied in Objective Two, the Associate Degree respondents viewed all six of the activities as important. None of the six activities had been implemented at the established minimum 5.0 level. The Baccalaureate Degree respondents viewed four of the activities as important and three of the activities as being implemented at a satisfactory level. Those activities included:

1. Identified competencies needed by ADN/RN students to enter the four-year nursing programs.
2. Provisions for testing out of courses offered in the third and fourth year curriculum.
3. Develop an advanced curriculum that is flexible to allow for variations among students.

The activities they viewed as not implemented were ones they would prefer not to implement. They did not view curriculum development and program changes as activities that needed assistance from outside sources.

Objective Three

Objective Three was designed to identify the number of Associate Degree nurses who sought advanced four-year college education.

The number of Associate Degree nurses who were identified as seeking advanced four-year education by the colleges that responded to the questionnaire represented 24.3% of the total population seeking Baccalaureate Degree education in the field of nursing. This statistic was a substantial revelation to the study. The researcher suspected there was a large number of Associate Degree/Registered Nurses seeking opportunities to continue their education. It was gratifying to have the survey reveal that one-fourth of the population studied was seeking more education. Certainly with this number of potential students, the process of articulation becomes even more important.

The number of registered nurses seeking advanced placement and

those who actually received advance placement by those programs participating in the study are found in Table 28.

Table 28. The number of registered nursing students attempting to receive advanced placement and the number actually receiving advanced placement by year reported

Year	RN's attempting advanced placement	RN's receiving advanced placement	Percentage receiving advanced placement
1980	1315	621	47.2
1979	1144	919	80.3
1978	756	649	85.8
1977	625	366	58.5
1976	287	158	55.0

The number of Registered Nurse students receiving advanced placement reveals major increases each year for the first four years included in this five-year survey period. Although the reasons for this substantial increase were not a part of the study, it would appear the total number of students seeking Baccalaureate Degree education has increased. Along with the larger numbers seeking higher education, there are the pressures of continuing education in the nursing profession.

Since 1979, the number of students actually receiving advanced placement has decreased significantly. This might be accounted for by the fact that enrollment in Baccalaureate Degree programs has increased

so rapidly that competition is also greater. It would appear--the larger potential enrollment, the tougher the criteria.

The remaining questions of Objective Three were statistically analyzed by using the two-tailed student t test. The t test was done to analyze the difference between the Associate Degree program respondents' mean scores and the minimum acceptance level of 5.0 as determined by the committee of experts. The Baccalaureate Degree respondents data were analyzed using the same criterion.

A table of statistical results will be included for each of the remaining questions of Objective Three. The same abbreviations and symbols that were used in the tables for Objective One will be used in tables for Objective Three.

Follow-up placement

The Associate Degree respondents rated "follow-up placement of two-year and four-year nursing graduates" as significantly different from the minimum acceptance level in importance ($t = 7.77$, $df = 88$, $P < .01$). The implementation level was being carried out at the minimum acceptance level.

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 6.21$, $df = 54$, $P < .01$). The implementation level was being carried out at the minimum acceptance level.

Both groups had higher mean scores than the minimum acceptance level and rated the activity as important. They both had lower

mean scores than the minimum acceptance level and agreed that the activity was not being implemented at the minimum acceptance level. The data are summarized in Table 29.

Table 29. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on item: follow-up placement of two-year and four-year nursing graduates

	Mean	S.D.	t	P
Assoc (Imp)	6.764	2.143	7.77	.000
Assoc (Impl)	4.918	2.674	-0.28	.777
Bacca (Imp)	6.873	2.237	6.21	.000
Bacca (Impl)	4.469	2.686	-1.38	.173

Counselor communication

The Associate Degree respondents rated "develop a communication procedure with community college counselors" as significantly different from the minimum acceptance level in importance ($t = 10.49$, $df = 86$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.97$, $df = 80$, $P < .01$).

The Baccalaureate Degree respondents rated the same activity as significantly different from the minimum acceptance level in importance ($t = 11.10$, $df = 54$, $P < .01$). The implementation level was being carried out at the minimum acceptance level.

Both groups had higher mean scores than the established minimum level. They agreed the activity was important. They both agreed the activity was not being implemented at the minimum acceptance level.

The data are summarized in Table 30.

Table 30. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: develop a communication procedure with community college counselors

	Mean	S.D.	t	P
Assoc (Imp)	7.161	1.922	10.49	.000
Assoc (Impl)	3.988	2.294	-3.49	.000
Bacca (Imp)	7.673	1.783	11.10	.000
Bacca (Impl)	4.412	2.632	-1.60	.117

Community survey

The Associate Degree respondents rated "determine educational needs through community survey and other available information" as significantly different from the minimum acceptance level in importance ($t = 7.66$, $df = 87$, $P < .01$). The implementation level was significantly different and had not met the minimum acceptance level ($t = -3.87$, $df = df$, $P < .01$).

The Baccalaureate Degree respondents rated this same activity as significantly different from the minimum acceptance level in importance ($t = 8.13$, $df = 54$, $P < .01$). The implementation level was being

carried out at the minimum acceptance level.

Both groups possessed higher mean scores than the minimum acceptance level and were in agreement with regard to the importance of the activity. The Associate Degree respondents rated the activity as not being implemented at the minimum acceptance level. The Baccalaureate Degree respondents rated the same activity slightly lower in degree of implementation than the Associate Degree respondents. The data are summarized in Table 31.

Table 31. Comparison of Associate and Baccalaureate programs with the established articulation score of 5 on the item: determine educational needs through community survey and other available information

	Mean	S.D.	t	P
Assoc (Imp)	6.727	2.116	7.66	.000
Assoc (Impl)	3.954	2.505	-3.89	.000
Bacca (Imp)	7.018	1.841	8.13	.000
Bacca (Impl)	4.431	2.663	-1.53	.134

Discussion of results of Objective Three

As shown in Table 28, the number of Registered Nurses attempting to achieve advanced placement has nearly doubled during the period 1978 to 1980. The number actually receiving advanced placement has fluctuated during the same period of time. This pattern may warrant further investigation.

The analysis of the data identified particular activities which

the respondents viewed as important to identifying the number of Associate Degree nurses who were seeking advanced four-year college education. Of the three activities studied for Objective Three, the Associate Degree respondents viewed the following activities as important:

1. Follow-up of placement of two-year and four-year nursing graduates.
2. Develop a communication procedure with community college counselors.
3. Determine educational needs through community survey and other available information.

None of the three activities had been implemented to the established minimum level of 5.0. The Baccalaureate Degree respondents reported all three of the activities as important and none of the three as being implemented to the established minimum mean score.

It is concluded that Associate Degree and Baccalaureate Degree respondents agree with regard to the importance of each item. They also agree that the implementation established minimum level has not been achieved. Without implementation of the activities it would be difficult to identify Associate Degree nurses who were seeking advanced four-year college education.

Objective Four

Objective Four was designed to determine the length of time that could be saved by an Associate Degree nurse, attempting to achieve advanced placement, to obtain a Baccalaureate Degree at each college.

Registered Nurses are known to complain that a Baccalaureate Degree program requires Registered Nurse students to repeat some material they already know. Because of this, more schools have planned curricula that would take students' knowledge into account and make special provisions for advanced placement.

The nursing program representatives who responded positively to the section in the questionnaire related to Objective Four were asked to select all the methods listed in the questionnaire that were used by the school for advanced placement. Their responses are summarized in Table 32.

Table 32. The methods used by Baccalaureate Degree programs to provide advanced placement

Method	Programs Reporting	
	Number	Percent
Teacher-made Exams (challenge exams)	34	57.6
CEEB/CLEP	18	30.5
Assessment of Nursing Care Skills	16	27.1
Transcripts	14	23.7
Nursing Core Final Exams	12	20.3
NLN Achievement Tests	6	10.1
Interview	1	1.6
Employment Record	0	0
State Board Score	0	0

Analysis of the data revealed that within the Baccalaureate Degree programs identified, 39 (or 66.1%) offered some type of advanced placement. Fourteen (or 23.7%) reported they did not extend advanced placement. The data are summarized in Table 32.

The majority of programs (57.6%) presently allowing advanced standing are using teacher-made challenge examinations. The CCEB/CLEP test was given second priority, with 30.5% of the schools reporting their use. The assessment of nursing care skills was the third most frequently marked criteria, 27.1%. Assessing nursing skills is a new method for allowing students to achieve advanced standing. It is considered a revolutionary change and is gaining in momentum. Nursing educators believe this is an efficient method for allowing advanced placement.

The advantage of advanced placement to the Associate Degree Registered Nurse seeking to obtain a Baccalaureate Degree is to save time and expense towards completing the remaining requirements for the Baccalaureate Degree. Those who are successful, can expect to be exempted from one or more lower division courses. The respondents were asked to indicate by semesters the maximum time a student could potentially save by taking some form of advanced placement test. Table 33 summarizes the responses.

The maximum time that could be saved by participating in advanced placement tests, as reported by the 25.4% of the respondents, was two semesters. Eight of the program respondents (13.5%), reported a time saving of three semesters. Five programs (8.4%), reported one

Table 33. Baccalaureate Degree programs reporting time saved in semesters by taking advanced placement tests

Semesters	Programs Reporting	
	Number	Percent
1	5	8.4
2	15	25.4
3	8	13.5
4	2	3.3
5	2	3.3
6	1	1.6

semester as the amount of time saved.

Discussion of results of Objective Four

Articulation, as defined by this study, is a planned process which facilitates continuous, efficient progress of students without hindrance toward the goal of a Baccalaureate Degree in nursing. Advanced standing would be one way of promoting that process. It is encouraging that two-thirds of the respondents (66.1%), make provision for some form of advanced standing. This would be encouraging for the Associate Degree/Registered Nurses as she looks to advanced education.

The primary method of allowing advanced standing by the Baccalaureate Degree programs was teacher-made challenge examinations.

Unless the test had been checked for its validity and reliability, it would appear more acceptable to use a standardized nursing test.

The use of the CEEB/CLEP test would be a legitimate way of testing the students' knowledge. It is a standardized test used by most colleges to allow students to avoid repetition of knowledge already achieved.

Finally, the use of assessing nursing care skills is a new method of testing that is gaining acceptance in use. It requires substantial preparation by the student and careful observation and administration by the evaluator. The disadvantage noted by the Baccalaureate Degree programs is the time and expense that is required to carry out such a test.

The discouraging information obtained in studying Objective Four was the amount of time that could be saved by an Associate Degree nurse achieving advanced placement. Two semesters was identified most frequently by the respondents, with three semesters and one semester following in that order. When considering the ADN/RN has already completed four semesters of nursing education, the amount of time required by the Baccalaureate Degree programs was discouraging.

It is concluded that articulation is limited, as evidenced by the loss of transfer course work from two to four-year programs.

Objective Five

Objective five was designed to identify the major problems encountered by Associate Degree nurses who sought advanced education.

The most common problems are identified in Table 34. These data were reported by representatives from the Baccalaureate Degree programs. They were asked to identify the problems their students encountered as they sought four-year degrees in nursing. The data are summarized in Table 34.

Table 34. Baccalaureate degree programs reporting common problems encountered by the students as they sought advanced degrees in nursing

Problem	Programs Reporting	
	Number	Percent
Home responsibilities	34	57.6
Class scheduling	29	49.1
Financial aid	27	45.7
Program planning for part-time students	13	22.0
Counseling time	10	16.9
Other	6	10.1

Home responsibilities was identified by 57.6% of the respondents as the major problem encountered by the students while pursuing an advanced degree program. Family responsibilities are an ever present fact of life, so the response was anticipated.

The second most frequently identified problem was class scheduling. One of the questions of the study addressed this problem. The respondents were asked about the availability of nontraditional class hours offered by the four-year nursing programs. The data obtained are summarized in Table 35.

Table 35. Baccalaureate degree programs reporting classes offered at nontraditional hours

Classes	Number	Percent
Evening	39	66.1
Evening nursing core	24	40.6
Weekend	11	18.6
None	8	13.6
Weekend nursing core	7	11.8

The availability of nontraditional class hours offered by the four-year schools of nursing revealed a high percentage of schools offering evening classes. However, weekend classes and evening nursing curriculum core courses were not nearly so readily available.

Financial aid was the third problem indicated by the respondents. The cost of higher education for the ADN/RN is compounded by the fact that she/he has probably been employed. Registered Nurses who are gainfully employed are responsible for their own finances or are expected to contribute to the family income. They need financing for

college tuition and for living expenses.

A summary of other problems encountered by the ADN/RN as reported by the Baccalaureate Degree programs are as follows:

1. Energy to do the work.
2. Inability to pass challenge examination.
3. Balance of work and school.
4. Resocialization.
5. Attempt to work too many hours.

Discussion of results of Objective Five

Registered Nurses are faced with numerous problems on their return to school in pursuit of nursing degrees. Just the thought of some of these problems is discouraging to many of them. Often it appears to be an insurmountable obstacle course. In spite of this, the number of ADN/RN's returning to complete their educational requirements for a Baccalaureate Degree in Nursing is continuing to increase, as evidenced by this study. If some of the problems can be addressed and if the articulation process can be enhanced, many more ADN/RN's will be encouraged and given the opportunity to complete Baccalaureate Degrees in nursing.

Articulation Activities: Importance and Implementation

This section of Chapter IV presents the analysis of the articulation scores obtained by Associate Degree programs and Baccalaureate Degree programs in 1980.

Hypothesis I

The data in this section provide for comparisons of various articulation activities between Associate Degree programs and Baccalaureate Degree programs sampled in the study. Comparisons were based on the following statistical techniques: the mean, standard deviation, and two-tailed student t test.

Comparison One: How similar are the mean articulation scores obtained from the two and four-year college respondents?

Null Hypothesis: There are no differences between the mean articulation scores obtained from Associate Degree programs and Baccalaureate Degree programs in nursing education within the midwest region identified.

Table 36 presents the mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities for each group. The articulation activities are listed by rank order of importance in promoting articulation between Associate Degree nursing programs and Baccalaureate Degree nursing programs. The rank order of importance was determined by the total group mean score rating for each activity.

Table 36. The mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities of the Associate Degree and Baccalaureate Degree respondents

Activity		Assoc ^a	Bacca ^b	Total	T
		Mean S.D.	Mean S.D.	Mean S.D.	Value P
1. Counseling service and advising are provided for ADN/RN graduates who desire to enter the four-year programs		7.714	8.527	8.021	-3.39**
	(Imp.) ^c	1.662	0.813	1.455	.000
		5.069	7.245	5.893	-4.74**
	(Impl.) ^d	2.587	2.661	2.815	.000
2. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs		7.946	7.482	7.776	1.67
	(Imp.)	1.584	1.645	1.617	.097
		4.114	5.000	4.439	-1.89
	(Impl.)	2.744	2.615	2.722	.061
3. Develop an advanced curriculum that is flexible to allow for variations among students		7.744	7.655	7.710	0.30
	(Imp.)	1.745	1.756	1.744	.765
		3.829	5.580	4.492	-3.57**
	(Impl.)	2.725	2.734		.001
4. Notify community college curriculum directors of changes made in the four-year nursing program		7.907	7.327	7.681	1.94
	(Imp.)	1.428	1.896	1.645	.055
		3.313	4.745	3.870	-2.89**
	(Impl.)	2.684	2.820	2.816	.005
5. Provisions for testing out of courses offered in the third and fourth year curriculum		7.482	7.691	7.564	-0.66
	(Imp.)	2.102	1.609	1.920	.509
		4.403	6.612	5.262	-4.69**
	(Impl.)	2.541	2.605	2.775	.000

^aAssoc - Associate Degree nursing respondents.

^bBacca - Baccalaureate Degree nursing respondents.

^cMeans and standard deviations for importance ratings.

^dMeans and standard deviations for level of implementation ratings.

**Significant at the .01 level of probability.

Table 36 (Continued)

Activity		Assoc ^a	Bacca ^b	Total	T
		Mean S.D.	Mean S.D.	Mean S.D.	Value P
6. Exchange program and curricula information	(Imp.)	7.611 1.580	7.455 1.358	7.55 1.500	0.64 .525
	(Impl.)	4.433 2.436	4.904 2.584	4.606 2.492	-1.07 .288
7. Develop a communicative procedure with community college counselors	(Imp.)	7.161 2.436	7.673 2.584	7.359 2.492	-1.62 .288
	(Impl.)	3.988 2.294	4.412 2.632	4.152 2.429	-0.95 .346
8. Conduct articulation meetings on area community college basis	(Imp.)	7.418 1.620	7.218 1.629	7.343 1.621	0.72 .474
	(Impl.)	3.965 2.749	3.865 2.744	3.927 2.738	0.21 .838
9. Use public relations materials to keep ADN/RN informed about the four-year nursing programs	(Imp.)	7.106 1.909	7.509 1.550	7.255 1.790	-1.40 .163
	(Impl.)	4.456 2.469	5.078 2.660	4.681 2.543	-1.37 .174
10. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs	(Imp.)	6.888 2.308	7.111 2.229	6.972 2.273	-0.57 .567
	(Impl.)	3.535 2.565	3.333 2.684	3.463 2.600	0.42 .673
11. Work jointly with community colleges to identify clinical experience centers	(Imp.)	7.207 1.930	6.546 2.193	6.951 2.054	1.83 .070
	(Impl.)	3.988 2.612	4.063 2.740	4.016 2.650	-0.15 .879
12. Foster professional development conferences for faculty from community colleges and universities	(Imp.)	7.067 2.126	6.611 2.235	6.895 2.171	1.21 .231
	(Impl.)	3.711 2.739	3.102 2.510	3.485 2.663	1.30 .196

Table 36 (Continued)

Activity		Assoc ^a	Bacca ^b	Total	T
		Mean S.D.	Mean S.D.	Mean S.D.	Value P
13. Determine educational needs through community survey and other available information	(Imp.)	6.727 2.116	7.018 1.841	6.839 2.013	-0.87 .337
	(Impl.)	3.954 2.505	4.431 2.663	4.130 2.565	-1.04 .301
14. Follow-up of placement of two-year and four-year nursing graduates	(Imp.)	6.764 2.143	6.373 2.237	6.806 2.172	-0.29 .774
	(Impl.)	4.918 2.674	4.469 2.686	4.754 2.673	0.93 .354
15. Invite two-year nursing instructors and counselors to visit four-year nursing instructors	(Imp.)	6.919 1.861	6.472 2.136	6.748 1.975	1.26 .212
	(Impl.)	2.416 2.392	3.146 2.492	2.696 2.447	-1.62 .109
16. Provide educational programs for students with special needs	(Imp.)	6.609 2.008	6.519 2.152	6.575 2.057	0.25 .803
	(Impl.)	3.386 2.053	3.796 2.458	3.538 2.212	-0.98 .328
17. Develop a program to identify prospective students for all career ladder levels in nursing	(Imp.)	6.656 2.269	6.273 2.345	6.510 2.297	0.97 .336
	(Impl.)	3.081 2.392	2.959 1.989	3.037 2.247	0.32 .751
18. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs	(Imp.)	6.258 2.254	6.698 2.241	6.423 2.251	-1.13 .262
	(Impl.)	3.490 2.401	4.304 2.864	3.993 2.654	-2.78** .003
19. Work jointly to provide in-service education	(Imp.)	6.671 2.323	5.759 2.754	6.324 2.525	2.03* .045
	(Impl.)	2.609 2.557	3.020 2.610	2.763 2.575	-0.33 .382

Table 36 (Continued)

Activity		Assoc ^a	Bacca ^b	Total	T
		Mean S.D.	Mean S.D.	Mean S.D.	Value P
20. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum		6.329	4.887	5.787	3.05**
	(Imp.)	2.563	2.806	2.738	.003
		1.949	1.979	1.960	-0.09
	(Impl.)	2.006	1.847	1.940	.932
21. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs		6.057	4.679	5.539	3.01**
	(Imp.)	2.684	2.607	2.730	.003
		1.805	2.178	1.943	-1.03
	(Impl.)	1.850	1.980	1.900	.307
22. Send pertinent information to students' former instructors		5.356	4.776	5.147	1.14
	(Imp.)	2.668	2.953	2.777	.257
		1.782	2.023	1.868	-0.63
	(Impl.)	1.680	2.188	1.871	.532
23. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs		4.864	5.537	5.120	-1.64
	(Imp.)	2.533	2.280	2.454	.104
		2.157	2.217	2.178	-0.20
	(Impl.)	1.838	1.489	1.716	.839
24. Utilize community college specialists in four-year nursing programs		5.046	4.192	4.727	2.13*
	(Imp.)	2.510	2.142	2.407	.035
		1.875	1.682	1.807	0.78
	(Impl.)	1.479	1.216	1.389	.436
25. Provide in-service education for two-year nursing instructors by four-year nursing instructors		4.349	4.654	4.464	-0.61
	(Imp.)	2.760	2.883	2.800	.542
		1.725	2.109	1.865	-1.12
	(Impl.)	1.615	1.969	1.754	.265

*Significant at the .05 level of probability.

Total group - importance

The following five activities were considered by the total group mean score to be the most important in promoting articulation:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter the four-year programs.
2. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.
3. Develop an advanced curriculum that is flexible to allow for variations among students.
4. Notify community college curriculum directors of changes made in the four-year nursing programs.
5. Provisions for testing out of courses offered in the third and fourth-year curriculum.

The following five activities were considered by the total group mean score to be the least important in promoting articulation:

1. Provide in-service education for two-year nursing instructors by four-year nursing instructors.
2. Utilize community college specialists in four-year nursing programs.
3. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.
4. Send pertinent information to students' former instructors.
5. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs.

Associate degree - importance

The Associate Degree nursing instructors viewed fifteen of the twenty-five articulation activities as important, while the Baccalaureate Degree nursing instructors viewed only 10 of the 25 articulation activities as important. The mean scores for the importance ratings were significantly higher for the Associate Degree instructors for the following activities:

1. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.
2. Notify community college curriculum directors of changes made in the four-year nursing programs.
3. Develop an advanced curriculum that is flexible for variations among students.
4. Exchange program and curricula information.
5. Conduct articulation meetings on area community college basis.
6. Work jointly with community colleges to identify clinical experience centers.
7. Foster professional development conferences for faculty from community colleges and universities.
8. Invite two-year nursing instructors and counselors to visit four-year nursing instructors.
9. Work jointly to provide in-service education.
10. Develop a program to identify prospective students for all career ladder levels in nursing.

11. Provide educational programs for students with special needs.
12. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum.
13. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs.
14. Send pertinent information to students' former instructors.
15. Utilize community college specialists in four-year nursing programs.

Baccalaureate Degree - importance

The mean scores for the importance ratings were significantly higher for Baccalaureate Degree instructors than for the Associate Degree instructors for the following activities:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth-year curriculum.
3. Develop a communication procedure with community college counselors.
4. Use public relations materials to keep ADN/RN informed about the four-year nursing programs.
5. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs.

6. Determine educational needs through community survey and other available information.
7. Follow-up of placement of two-year and four-year nursing graduates.
8. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.
9. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.
10. Send pertinent information to students' former instructors.

The item "send pertinent information to students' former instructors" was the only item common to both groups. The mean score rating was found to be higher by both groups when compared to the established minimum level.

Total group - implementation

The level of implementation mean score ratings was determined by the total group mean score rating for each activity. The five activities considered by the total group as assisting in carrying out the implementation activities of the articulation process are as follows:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth-year curriculum.
3. Follow-up of placement of two-year and four-year nursing graduates.

4. Use public relations material to keep ADN/RN informed about the four-year nursing programs.
5. Exchange program and curricula information.

The five activities considered by the total group mean score as less likely to be carried out in the implementation activities for the articulation process are as follows:

1. Utilize community college specialists in four-year nursing programs.
2. Provide in-service education for two-year nursing instructors by four-year nursing instructors.
3. Send pertinent information to students' former instructors.
4. Utilize two-year nursing instructors to help evaluate and recommend direction in four-year nursing programs.
5. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum.

Associate Degree - implementation

The Associate Degree nursing instructors viewed only six of the twenty-five implementation activities as being implemented, while the Baccalaureate Degree nursing instructors viewed nineteen of the twenty-five articulation activities as being implemented. The mean scores for the level of implementation ratings were significantly higher for the Associate Degree instructors than for Baccalaureate Degree instructors for the following activities:

1. Conduct articulation meetings on area community college basis.
2. Foster professional development conferences for faculty from community colleges and universities.
3. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs.
4. Conduct follow-up of placement of two-year and four-year nursing graduates.
5. Develop a program to identify prospective students for all career ladder levels in nursing.
6. Invite two-year nursing instructors and counselors to visit four-year nursing instructors.

Baccalaureate Degree - implementation

The mean scores for the level of implementation ratings were significantly higher for the Baccalaureate Degree instructors than for the Associate Degree instructors for the following activities:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth-year curriculum.
3. Develop a communication procedure with community college counselors.
4. Develop an advanced curriculum that is flexible to allow for variations among students.

5. Use public relations materials to keep ADN/RN informed about the four-year nursing programs.
6. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.
7. Exchange program and curricula information.
8. Notify community colleges' curriculum directors of changes made in the four-year nursing program.
9. Determine educational needs through community survey and other available information.
10. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.
11. Work jointly with community colleges to identify clinical experience centers.
12. Provide educational programs for students with special needs.
13. Invite two-year nursing instructors and counselors to visit four-year nursing instructors.
14. Work jointly to provide in-service education.
15. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.
16. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum.
17. Send pertinent information to students' former instructors.

18. Utilize two-year nursing instructors to help evaluate and recommend direction in four-year nursing programs.
19. Provide in-service education for two-year nursing instructors by four-year nursing instructors.

The item "invite two-year nursing instructors and counselors to visit four-year nursing instructors" was the only item common to both groups. The mean score rating was found to be higher in both groups than the established minimum level.

Total group - t test

The two-tailed t test revealed five articulation activities as significantly different between the two groups for the importance of the activities.

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter. The Baccalaureate Degree respondents rated the importance of the activity higher than the Associate Degree respondents ($t = -3.398$, $df = 144$, $P < .01$).
2. Utilize community college specialists in four-year nursing programs. The Associate Degree nursing respondents rated the importance of the activity higher than the Baccalaureate Degree respondents ($t = 2.13$, $df = 120$, $P < .05$).
3. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum. The Associate Degree nursing respondents rated the importance of the activity

higher than the Baccalaureate Degree respondents ($t = 3.05$, $df = 102$, $P < .01$).

4. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs. The Associate Degree nursing respondents rated the importance of the activity higher than the Baccalaureate Degree respondents ($t = 3.01$, $df = 112$, $P < .01$).
5. Work jointly to provide in-service education. The Associate Degree nursing respondents rated the importance of the activity higher than the Baccalaureate Degree respondents ($t = 2.03$, $df = 98$, $P < .05$).

The two-tailed student t test revealed five articulation activities of implementation as significantly different between the two groups in the level of implementation for the activities.

1. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs. The Baccalaureate Degree respondents rated the activity higher than the Associate Degree respondents ($t = -2.73$, $df = 92$, $P < .01$).
2. Counseling service and advising are provided for ADN/RN graduates who desire to enter. The Baccalaureate Degree respondents rated the activity higher than the Associate Degree respondents ($t = -4.74$, $df = 107$, $P < .01$).

3. Provision for testing out of courses offered in the third and fourth year curriculum. The Baccalaureate Degree respondents rated the activity higher than the Associate Degree respondents ($t = 4.69$, $df = 100$, $P < .01$).
4. Develop an advanced curriculum that is flexible to allow for variations among students. The Baccalaureate Degree programs responded by rating the activity higher than the Associate Degree respondents ($t = -3.57$, $df = 103$, $P < .01$).
5. Notify community college curriculum directors of changes made in the four-year nursing program. The Baccalaureate Degree respondents rated the activity higher than the Associate Degree respondents ($t = -2.89$, $df = 102$, $P < .01$).

Conclusion: Hypothesis I

The null hypothesis--there are no differences between the mean articulation scores obtained by Associate Degree programs and Baccalaureate Degree programs in nursing education--was rejected.

Through the use of the two-tailed student t test, five articulation activities were identified as significantly different between the two groups in the importance of the activities:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter the program.
2. Identify competencies needed by ADN/RN students to enter the four-year nursing programs.

3. Develop an advanced curriculum that is flexible to allow for variations among students.
4. Notify community college curriculum directors of changes made in the four-year nursing program.
5. Provisions for testing out of courses offered in the third and fourth year curriculum.

The Baccalaureate Degree respondents viewed counseling service and advising as more important than did the Associate Degree respondents. In accepting the ADN graduate into the nursing programs, the need for counseling and advising becomes more evident, both to the student and to the faculty. The Associate Degree instructors would ultimately be further removed from this problem.

The Associate Degree respondents viewed utilizing community college specialists in four-year nursing programs more importantly than did the Baccalaureate Degree respondents. The Baccalaureate programs apparently do not feel that input from community college specialists would be helpful in carrying out the mission of the development of a professional nurse.

The Associate Degree respondents viewed involving nursing instructors from two-year nursing in revisions of four-year nursing curriculum more importantly than did the Baccalaureate Degree respondents. At this point in time, the respondents from Baccalaureate programs may not see a need for curriculum revisions and therefore hesitate to make changes. The respondents from the Associate Degree programs see

a great need for change. They believe Baccalaureate education should be a continuation rather than a repetition of learned knowledge.

Utilizing two-year nursing instructors in evaluating and recommending directions in four-year nursing programs was considered very important by the Associate Degree respondents. The Baccalaureate Degree respondents disagreed with the activity. Again, since they are considered the major university, seeking evaluation and recommendations from two-year colleges would not be something they would want or feel was necessary.

Finally, working jointly to provide in-service education was considered as more important by the Associate Degree respondents. The activity implies that some in-service would be provided by Associate Degree programs to Baccalaureate Degree programs. Again, the four-year institution participants regard themselves as the authority and perceive that they provide in-service, not have it provided for them.

The two-tailed student t test identified five articulation activities as significantly different between the two groups in the implementation of the activities. The Baccalaureate Degree respondents rated all five of the activities as being implemented at a higher level than the Associate Degree respondents:

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth year curriculum.

3. Follow-up of placement of two-year and four-year nursing graduates.
4. Use public relations materials to keep ADN/RN informed about the four-year nursing programs.
5. Exchange program and curricula information.

The Baccalaureate Degree respondents apparently felt they did a better job at utilizing planned active recruitment among the ADN/RN graduates than did the Associate Degree respondents. They also believed they have implemented to a satisfactory level counseling service and advising for the ADN/RN graduate.

The two groups differ significantly in respect to how they viewed the implementation of provisions for testing out of courses. Associate Degree respondents gave the activity a much lower rating than the Baccalaureate Degree respondents.

Developing an advanced curriculum that was flexible to allow for variation among students was rated much higher by the Baccalaureate Degree respondents. The Associate Degree respondents had a much different view of this activity. This is one of the articulation activities the Associate Degree respondents would like to see as a revision in the Baccalaureate Degree curriculum.

Finally, Associate Degree respondents did not perceive that the Baccalaureate Degree personnel notified community college curriculum directors of changes made in the four-year nursing programs. Both groups rated the implementation rate below the determined minimum level of 5.0 but the Associate Degree respondents rated the

implementation considerably lower than the participants from the Baccalaureate Degree programs.

Findings indicated that both groups of respondents believed in the importance of the articulation activities but they did not agree on how well the activities had been implemented. It was apparent that the Baccalaureate programs were either reluctant to implement the activities or perceived that they had implemented the activity to a satisfactory level. Many articulation activities stem from the nature of the education program. The tradition of local control and institutional autonomy encourages suspicion when there are attempts to coordinate the systems. It also breeds a sense of competition and stimulates fears that one institutional level will attempt to dominate the other. These factors affect articulation outcomes.

Hypothesis II

The data in this section provide for comparisons of various articulation activities between Associate Degree programs involved in the study and the minimum articulation score required to be considered an acceptable level of articulation. Comparisons were based on the following statistical technique: the means, standard deviation, and the two-tailed student t test.

Comparison Two: How similar are the Associate Degree programs mean scores and the acceptable level scores?

Null Hypothesis: There are no differences between the Associate Degree program's mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.

Table 37 presents the mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities for the Associate Degree respondents as compared to the minimum acceptance level of five. The articulation activities are listed by rank order of importance. This rank order was determined by the mean score for each activity.

A committee of experts had determined 5.0 was the minimum acceptance level of importance of articulation and 5.0 as the minimum acceptance level of implementation. The study found Associate Degree respondents differed significantly in 22 of the 25 activities concerning the importance level. Twenty-one of the activities were found to be highly significant while one activity was significant.

The following five activities had the highest mean scores and were considered by the Associate Degree respondents to be the most important in promoting articulation as compared with the established minimum acceptance level.

1. Identify competencies needed by ADN/RN students to enter the four-year nursing programs.
2. Notify community college curriculum directors of changes made in the four-year nursing program.
3. Develop an advanced curriculum that is flexible to allow for variations among students.

4. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
5. Exchange program and curricula information.

The Associate Degree respondents differed significantly in 23 of the 25 activities concerning the level of implementation. Twenty of the implementation activities were found to be highly significant while three were significant in not being implemented at the minimum acceptable 5.0 level.

When compared to the minimum acceptance level, the following five activities had a lower mean score than the established standard and were considered as not implemented at sufficient level.

1. Exchange program and curricula information.
2. Foster professional development conferences for faculty from community colleges and universities.
3. Notify community college curriculum directors of changes made in the four-year nursing programs.
4. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.
5. Invite two-year nursing instructors and counselors to visit four-year nursing instructors.

The results of the study indicated that Associate Degree respondents believed articulation activities were important and should be promoted. The study also indicated those same respondents did not perceive those activities as being implemented at an acceptable level.

Conclusion: Hypothesis II

The null hypothesis--there are no differences between the Associate Degree program's mean scores on the articulation scale and the established minimum articulation score required to be considered an acceptable level of articulation--was rejected.

The two-tailed student t test was used to analyze the results. With the exception of three articulation activities, the remaining 22 were found significantly important. The Associate Degree programs viewed articulation as vital to the student who wishes to pursue higher education, to the strengthening the integrity of continuing education and as an answer to the existing shortage of professional nurses.

The Associate Degree respondents perceived the implementation level of articulation as failing to meet the minimum requirements established by the committee of experts. Only two of the activities had been implemented to the satisfaction of the Associate Degree respondents. In their view, this is a serious problem in the continuing education of Associate Degree/Registered Nurses to the Baccalaureate Degree level of professional nursing.

Hypothesis III

The data in this section provide for comparisons of various articulation activities between the Baccalaureate Degree programs involved in the study and the established minimum articulation score

required to be considered an acceptable level of articulation. Comparisons were based on the following statistical technique: the means, standard deviation, and the two-tailed student t test.

Comparison Three: How similar are the Baccalaureate Degree programs' mean scores and the acceptable scores?

Null Hypothesis: There are no differences between the Baccalaureate Degree programs' mean scores on the articulation scale and the minimum articulation score required to be considered an acceptable level of articulation.

Table 38 presents the mean, standard deviations and two-tailed student t test for importance and implementation ratings of articulation activities for the Baccalaureate Degree respondents as compared to the minimum acceptance 5.0 level. The articulation activities are listed by rank order of importance. This rank order was determined by the mean score for each activity.

The committee of experts had determined 5.0 was the established minimum mean score of importance of articulation and 5.0 was the established minimum mean score of implementation. The study revealed that Baccalaureate Degree respondents differed significantly in 20 of the 25 activities for the importance level. Eighteen of the activities were found to be significant.

The following five activities had the highest mean scores and were considered by the Baccalaureate Degree respondents to be the most important in promoting articulation as compared with the established minimum mean score of 5.0:

Table 37. The mean, standard deviation and two-tailed student t test for importance and implementation ratings of articulation activities of the Associate Degree respondents as compared to the minimum acceptance level of five.

Activity		Assoc ^a	est ^b	T
		Mean S.D.	Mean S.D.	Value P
1. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs	(Imp.)	7.946 1.584	5.000 0.0	17.94** .000
	(Impl.)	4.114 2.744	5.000 0.0	-3.03** .003
2. Notify community college curriculum directors of changes made in the four-year nursing program	(Imp.)	7.907 1.428	5.000 0.0	18.88** .000
	(Impl.)	3.313 2.684	5.000 0.0	-5.62** .000
3. Develop an advanced curriculum that is flexible to allow for variations among students	(Imp.)	7.744 1.745	5.000 0.0	14.92** .000
	(Impl.)	3.829 2.725	5.000 0.0	14.92* .000
4. Counseling service and advising are provided for ADN/RN graduates who desire to enter the four-year programs	(Imp.)	7.714 1.662	5.000 0.0	15.58** .000
	(Impl.)	5.069 2.587	5.000 0.0	0.25 .000
5. Exchange program and curricula information	(Imp.)	7.611 1.580	5.000 0.0	16.11** .000
	(Impl.)	4.433 2.436	5.000 0.0	16.11** .030

^aAssoc - Associate Degree nursing respondents.

^best - Established minimum mean score.

* Significant at the .05 level of probability.

** Significant at the .01 level of probability.

Table 37 (Continued)

Activity		Assoc ^a		est ^b	T Value P
		Mean S.D.	Mean S.D.	Mean S.D.	
6. Provisions for testing out of courses offered in the third and fourth year curriculum	(Imp.)	7.482 2.102	5.000 0.0	10.89** .000	
	(Impl.)	4.403 2.541	5.000 0.0	-2.06* .042	
7. Conduct articulation meetings on area community college basis	(Imp.)	7.418 1.620	5.000 0.0	14.24** .000	
	(Impl.)	3.965 2.749	5.000 0.0	-3.47** .001	
8. Work jointly with community colleges to identify clinical experience centers	(Imp.)	7.207 1.930	5.000 0.0	10.67** .000	
	(Impl.)	3.988 2.612	5.000 0.0	-3.47** .001	
9. Develop a communication procedure with community college counselors	(Imp.)	7.161 1.922	5.000 0.0	10.49** .000	
	(Impl.)	3.988 2.294	5.000 0.0	-3.97** .000	
10. Use public relations materials to keep ADN/RN informed about the four-year nursing programs	(Imp.)	7.106 1.909	5.000 0.0	10.70** .000	
	(Impl.)	4.456 2.469	5.000 0.0	-2.09* .039	
11. Foster professional development conferences for faculty from community colleges and universities	(Imp.)	7.067 2.126	5.000 0.0	9.18** .000	
	(Impl.)	3.711 2.739	5.000 0.0	-4.29** .000	
12. Invite two-year nursing instructors and counselors to visit four-year nursing instructors	(Imp.)	6.919 1.861	5.000 0.0	9.56** .000	
	(Impl.)	2.416 2.392	5.000 0.0	-9.48** .000	

Table 37 (Continued)

Activity		Assoc ^a est ^b		T Value P
		Mean S.D.	Mean S.D.	
13. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs		6.888	5.000	7.71**
	(Imp.)	2.308	0.0	.000
		3.535	5.000	-5.30**
	(Impl.)	2.565	0.0	.000
14. Follow-up of placement of two-year and four-year nursing graduates		6.764	5.000	7.77**
	(Imp.)	2.143	0.0	.000
		4.918	5.000	-0.28
	(Impl.)	2.674	0.0	.777
15. Determine educational needs through community survey and other available information		6.727	5.000	7.66**
	(Imp.)	2.116	0.0	.000
		3.954	5.000	-3.89**
	(Impl.)	2.505	0.0	.000
16. Work jointly to provide in-service education		6.671	5.000	6.75**
	(Imp.)	2.323	0.0	.000
		2.609	5.000	-8.47**
	(Impl.)	2.557	0.0	.000
17. Develop a program to identify prospective students for all career levels in nursing		6.656	5.000	6.92**
	(Imp.)	2.269	0.0	.000
		3.081	5.000	-7.44**
	(Impl.)	2.392	0.0	.000
18. Provide educational programs for students with special needs.		6.609	5.000	7.48**
	(Imp.)	2.008	0.0	.000
		3.386	5.000	-7.16**
	(Impl.)	2.053	0.0	.000
19. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum		6.329	5.000	4.87**
	(Imp.)	2.563	0.0	.000
		1.949	5.000	-13.44**
	(Impl.)	2.006	0.0	.000

Table 37 (Continued)

Activity		Assoc ^a est ^b		T Value P
		Mean S.D.	Mean S.D.	
20. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs		6.258	5.000	5.27**
	(Imp.)	2.254	0.0	.000
		3.490	5.000	-4.71**
	(Impl.)	2.401	0.0	.000
21. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs		6.057	5.000	3.69**
	(Imp.)	2.684	0.0	.000
		1.805	5.000	-15.15**
	(Impl.)	1.850	0.0	.000
22. Send pertinent information to students' former instructors		5.356	5.000	1.25
	(Imp.)	2.668	0.0	2.16
		1.732	5.000	-16.92**
	(Impl.)	1.680	0.0	.000
23. Utilize community college specialists in four-year nursing programs		5.046	5.000	0.17
	(Imp.)	2.510	0.0	.865
		1.875	5.000	-18.90**
	(Impl.)	1.479	0.0	.000
24. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs		4.864	5.000	-0.50
	(Imp.)	2.533	0.0	.615
		2.157	5.000	-14.10**
	(Impl.)	1.838	0.0	.000
25. Provide in-service education for two-year nursing instructors by four-year nursing instructors		4.349	5.000	-2.19*
	(Imp.)	2.760	0.0	.031
		1.725	5.000	-18.14**
	(Impl.)	1.615	0.0	.000

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth year curriculum.
3. Develop a communication procedure with community college counselors.
4. Develop an advanced curriculum that is flexible to allow for variations among students.
5. Use public relations materials to keep ADN/RN graduates informed about the four-year nursing programs.

The Baccalaureate Degree respondents differed significantly in 16 of the 25 activities for the level of implementation. Two of the implementation activities were found to be highly significant and had a higher mean score than the minimum acceptance of implementation.

1. Counseling service and advising are provided for ADN/RN graduates who desire to enter.
2. Provisions for testing out of courses offered in the third and fourth-year curriculum.

Fourteen of the implementation activities were found to be significant in not being implemented at the established minimum mean score of 5.0.

When compared to the established mean score, the following five activities had a lower mean score and were viewed as not implemented at that level:

1. Use public relations materials to keep ADN/RN graduates informed about the four-year nursing programs.
2. Follow-up of placement of two-year and four-year nursing graduates.
3. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.
4. Provisions for testing out of courses offered in the third and fourth-year curriculum.
5. Develop a communication procedure with community college counselors.

The results of the study indicate that Baccalaureate Degree respondents believe articulation activities are important and should be promoted. The study results also indicate those same respondents do not see those activities implemented at the established minimum mean score. They did perceive articulation activities being implemented at a higher rate than the Associate Degree respondents.

Conclusion: Hypothesis III

The null hypothesis--there are no differences between the Baccalaureate Degree program's mean scores on the articulation scale and the established minimum mean score required to be considered an acceptable level of articulation--was rejected. The two-tailed student t test was used to analyze the results.

Baccalaureate Degree respondents rated all but five of the activities as significantly important. They agreed that in order to have an

Table 38. The mean, standard deviation and two-tailed student t test for importance and implementation activities for the Baccalaureate Degree respondents as compared to the minimum acceptance level of five

Activity	Bacca ^a		est ^b	T Value P
	Mean S.D.	Mean S.D.	Mean S.D.	
1. Counseling service and advising are provided for ADN/RN graduates (Imp.) who desire to enter the four-year programs	8.527 0.813	5.000 0.0	32.17** .000	
2. Provisions for testing out of courses offered in the third and fourth year curriculum (Imp.)	7.691 1.609	5.000 0.0	12.41** .000	
(Impl.)	6.612 2.605	5.000 0.0	4.33** .000	
3. Develop a communication procedure with community college counselors (Imp.)	7.673 1.785	5.000 0.0	11.10** .000	
(Impl.)	4.412 2.632	5.000 0.0	-1.60 .117	
4. Develop an advanced curriculum that is flexible to allow for variations among students (Imp.)	7.655 1.756	5.000 0.0	11.21** .000	
(Impl.)	5.580 2.734	5.000 0.0	1.50 .140	
5. Use public relations materials to keep ADN/RN informed about the four-year nursing programs (Imp.)	7.509 1.550	5.000 0.0	12.00** .000	
(Impl.)	5.078 2.660	5.000 0.0	0.21 .834	

^aBacca - Baccalaureate Degree nursing respondents.

^best - Established minimum mean score.

** Significant at the .01 level of probability.

Table 38 (Continued)

Activity		Bacca ^a	est ^b	T
		Mean S.D.	Mean S.D.	Value P
6. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs	(Imp.)	7.482 1.645	5.000 0.0	11.08** .000
	(Impl.)	5.000 2.615	5.000 0.0	0.0 1.000
7. Exchange program and curricula information	(Imp.)	7.455 1.358	5.000 0.0	13.40** .000
	(Impl.)	4.904 2.584	5.000 0.0	-0.27 .790
8. Notify community college curriculum directors of changes made in the four-year nursing program	(Imp.)	7.327 1.896	5.000 0.0	9.10** .000
	(Impl.)	4.745 2.820	5.000 0.0	-0.65 .522
9. Conduct articulation meetings on area community college basis	(Imp.)	7.218 1.629	5.000 0.0	10.10** .000
	(Impl.)	3.865 2.744	5.000 0.0	-2.98** .004
10. Encourage core curriculum in two- year programs to enhance the articulation process with four- year programs	(Imp.)	7.111 2.229	5.000 0.0	6.96** .000
	(Impl.)	3.333 2.684	5.000 0.0	-4.30** .000
11. Determine educational needs through community survey and other available information	(Imp.)	7.018 1.841	5.000 0.0	8.13* .000
	(Impl.)	4.431 2.663	5.000 0.0	-1.53 .134
12. Follow-up of placement of two-year and four-year nursing graduates	(Impl.)	6.873 2.237	5.000 0.0	6.21** .000
	(Impl.)	4.469 1.686	5.000 0.0	-1.38 .173

*Significant at the .05 level of probability.

Table 38 (Continued)

Activity		Bacca ^a Mean S.D.	est ^b Mean S.D.	T Value P
13. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs	(Imp.)	6.698 2.241	5.000 0.0	5.52** .000
	(Impl.)	4.804 2.864	5.000 0.0	-0.49 .627
14. Foster professional development conferences for faculty from community colleges and universities	(Imp.)	6.611 2.235	5.000 0.0	5.30** .000
	(Impl.)	3.102 2.510	5.000 0.0	-4.29** .000
15. Work jointly with community colleges to identify clinical experience centers	(Imp.)	6.546 2.193	5.000 0.0	5.23** .000
	(Impl.)	4.063 2.740	5.000 0.0	-2.37* .022
16. Provide educational programs for students with special needs	(Imp.)	6.519 2.152	5.000 0.0	5.18** .000
	(Impl.)	3.796 2.453	5.000 0.0	-3.43** .001
17. Invite two-year nursing instructors and counselors to visit four-year nursing instructors	(Imp.)	6.472 2.136	5.000 0.0	5.02** .000
	(Impl.)	3.146 2.492	5.000 0.0	-5.15** .000
18. Develop a program to identify prospective students for all career ladder levels in nursing	(Imp.)	6.273 2.345	5.000 0.0	4.03** .000
	(Impl.)	2.959 1.989	5.000 0.0	-7.18** .000
19. Work jointly to provide in-service education	(Imp.)	5.759 2.754	5.000 0.0	2.03* .048
	(Impl.)	3.020 2.610	5.000 0.0	-5.31** .000

Table 38 (Continued)

Activity		Bacca ^a		est ^b		T Value P
		Mean S.D.	Mean S.D.	Mean S.D.	Mean S.D.	
20. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs	(Imp.)	5.537 2.280	5.000 0.0	1.73 .089		
	(Impl.)	2.217 1.489	5.000 0.0	-12.67** .000		
21. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum	(Imp.)	4.887 2.806	5.000 0.0	-0.29 .770		
	(Impl.)	1.979 1.847	5.000 0.0	-11.21** .000		
22. Send pertinent information to students' former instructors	(Imp.)	4.776 2.953	5.000 0.0	-0.53 .597		
	(Impl.)	2.023 2.188	5.000 0.0	-8.92** .000		
23. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs	(Imp.)	4.679 2.607	5.000 0.0	-0.90 .375		
	(Impl.)	2.178 1.980	5.000 0.0	-9.56** .000		
24. Provide in-service education for two-year nursing instructors by four-year nursing instructors	(Imp.)	4.654 2.883	5.000 0.0	-0.87 .391		
	(Impl.)	2.109 1.929	5.000 0.0	-9.96** .000		
25. Utilize community college specialists in four-year nursing programs	(Imp.)	4.192 2.142	5.000 0.0	-2.72** .009		
	(Impl.)	1.682 1.216	5.000 0.0	-18.11** .000		

acceptable articulation for transfer of students these activities were important and possibly essential.

With regard to implementation, Baccalaureate Degree respondents perceived this function as someone else's problem. They indicated eight of the activities had been implemented at or above the minimum level of satisfaction. The remaining 17 implementation activities were rated significantly lower than the established minimum level.

In former years, a Baccalaureate Degree in nursing was not as important as it is today. Also, a few years ago, because of the scarcity of programs, any Baccalaureate Degree would be attractive to a nursing student. It did not have to be a Baccalaureate Degree in nursing. The nursing profession is raising its standards and its educational requirements, and nurses without legitimate degrees in nursing are encountering problems in their profession. It would seem that the articulation process is more important now than ever before. It is vital that directors of Baccalaureate Degree programs look realistically at the process of articulation.

Hypothesis IV

The data in this section provide for the comparison of the academic preparation of the respondents of the Associate Degree programs and the Baccalaureate Degree programs involved in the study. Comparisons were based on the Chi-square statistical technique.

Comparison Four: How similar are the academic preparations of the respondents of the Associate Degree programs and the Baccalaureate Degree programs?

Null Hypothesis: There are no differences between the academic preparation of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

Table 39 provides data, analyzed through the use of Chi-square on the levels of education variables. Six Associate Degree respondents indicated their highest level of education was the Baccalaureate preparation. The Baccalaureate programs indicated their minimum educational level was at the Master's Degree. Because of the limited number of respondents with Baccalaureate Degree preparation, it was determined to examine the Master's and Doctorate Degree qualifications and to compute the Chi-square using only these two variables.

Table 39. The academic level of preparation

Variable	Master's	Doctoral	Row Total
Assoc #	85	10	95
%	89.5	10.5	
Bacca #	26	29	55
%	47.3	52.7	36.7
Column #	111	39	150
%	74.0	36.0	100.0

The null hypothesis was rejected. The Chi-square analysis of the data revealed the educational level is not independent of the Associate Degree and the Baccalaureate Degree ($\chi^2 = 30.38, P < .000$). The academic preparation of the Associate Degree respondents differed significantly from that of the Baccalaureate Degree respondents. Many more Associate Degree respondents have lower educational qualifications than would be expected. One obvious fact that could account for this is the higher educational standard required by the four-year colleges of nursing. In addition, the lack of educationally prepared people are at a premium as pointed out by Fields (1980, p. 6). Regardless of the reasons, the fact remains there is a definite need for more professional nurses with a background in higher education.

In connection with the educational level of the respondents, the Chi-square was computed on the position held by the respondents. Table 40 indicates Chi-square results for the following six variables:

1. Professor
2. Director of nursing education
3. Chairperson, Division of Nursing Education
4. Advisor
5. Dean - Administrator
6. Coordinator of nursing education

The Chi-square analysis of the position held by the respondents is not independent of the Associate Degree and the Baccalaureate Degree ($\chi^2 = 28.265, df = 6, P < .0001$).

The position with the highest number (43.3%) of Associate Degree

Table 40. Chi-square values for respondents by position

Variable	Professor	Director of Nursing Education	Chairperson Division of Nursing Education	Advisor	Dean Adminis- trator	Coordinator of nursing education	Row total
Assoc #	1	42	28	0	8	16	97
%	1.0	43.3	28.9	0.0	8.2	16.5	63.8
Bacca #	4	10	18	1	18	4	55
%	7.3	18.2	32.7	1.8	32.7	7.3	36.2
Column #	5	52	46	1	26	20	152
Total %	3.3	34.2	30.3	0.7	17.1	13.2	100.0

respondents was the Director of Nursing Education. The second highest was Chairperson, Division of Nursing Education, with 28.9%. The highest percent of the Baccalaureate Degree respondents by position was shared by two classifications; Chairperson, Division of Nursing Education, and Dean-Administrator were equally represented with 32.7% each.

The results of the survey indicated 97.9% of Associate Degree respondents and 90.9% of the Baccalaureate Degree respondents had positions of responsibility and authority in their organizational structures. This fact plus the high percent of questionnaire response (Table 2) was encouraging for lending credibility to the study. The researcher notes caution should be used in interpreting the results. Two cells had less than the required number of five.

Conclusion - Hypothesis IV

Inspection of the data on the academic level of preparation revealed a low percent of adequately prepared persons for the jobs they are expected to carry out. Excluding the six Baccalaureate Degree prepared persons in the data to compute the Chi-square test, does not alter the fact that Baccalaureate prepared people do exist. Not only do they exist, but they hold positions of authority as was also revealed by the study.

The Associate Degree programs have a real need to improve the academic credentials of their nursing faculty. Examination of the three levels of preparation reveals Baccalaureate preparation, 7.5%; Masters Degree preparation, 82%; and Doctoral Degree preparation,

10%. The problem appears to be that Baccalaureate Degree programs are not designed to prepare nurses for faculty positions. Their undergraduate curriculum does not contain educational or administrative courses. Frequently, Master's Degree preparation is in a specialty field such as Medical-Surgical Nursing, ignoring the need for faculty teaching skills. Since this is an obvious deficiency, it could account for the reluctance on the part of Baccalaureate Degree programs to recognize input from the Associate Degree program instructors.

The Baccalaureate Degree programs are faced with similar problems. The persons with Master's Degrees are experts in their nursing specialty but frequently lack teaching skills. The respondents who occupied authority positions indicated 47.3% had Master's Degree qualifications and 52.7% had Doctoral Degree preparation. This means that nearly half of the collegiate faculty lacks Doctoral Degree preparation. The researcher doubts this would be true of many other colleges within the university system.

It is true that colleges of nursing face an undersupply of persons with graduate degrees able to fill their faculty positions. This would be another reason to look seriously at the problem of articulation. Encouraging and promoting persons through the rigors of education from the Associate Degree level to the Doctoral Degree level would be advantageous to the nursing profession.

Hypothesis V

The data in this section provide for the comparison of the years of nursing practice experience of the respondents of the Associate Degree programs and the Baccalaureate Degree programs involved in the study. Comparisons were based on the mean, the median and the Chi-square statistical technique.

Comparison Five: How similar are the years of nursing practice experience of the respondents of the Associate Degree programs and the Baccalaureate Degree programs?

Null Hypothesis: There are no differences between the years of nursing experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

Table 41 provides data, analyzed through the use of the mean and median, for the number of nursing experience years.

Table 41. The years of nursing practice of the Associate Degree and Baccalaureate Degree respondents

	Mean	Median
Assoc	12.16	10.0
Bacca	11.82	10.0

The Chi-square was applied to test the hypothesis. In order to run the test, the years were grouped into five-year intervals. This grouping was selected, rather than a smaller or larger interval, believing the five-year grouping was more homogenous. The data are summarized in Table 42.

Table 42. Chi-square values for years of nursing practice

Variables		0-5	6-10	11-15	16-20	21-25	26-30	Row total
Assoc	#	30	26	14	11	5	11	97
	%	30.9	26.8	14.4	11.3	5.2	11.3	63.8
Bacca	#	12	16	6	11	5	5	55
	%	21.8	29.1	10.9	20.0	9.1	9.1	36.2
Column		42	42	20	22	10	16	152
Total		27.6	27.6	13.2	14.5	6.6	10.5	100

The null hypothesis was accepted. The Chi-square data analysis demonstrated nursing experience was independent of the degree ($\chi^2 = 4.26566$, $df = 5$, $P < 0.5118$). The number of years of nursing practice of the Associate Degree respondents and the Baccalaureate Degree respondents revealed no significant difference.

The Chi-square measured difference in years of nursing practice. The years were grouped into five-year intervals. The first interval (0-5) contained the largest group with 30.9% for the Associate Degree respondents. The second interval (6-10) contained the next largest group with 26.8%. The next interval (11-15) contained 14.4%. The range of nursing practice years was one to 35. The mean score was 12.16 years.

The Baccalaureate Degree respondents' largest interval (6-10 years) of nursing practice contained 29.1%. The next interval (0-5) had 21.8%. The third ranking interval (16-20) contained 20.0% of the

respondents. The next interval (11-15) ranked fourth with 10.9%. The range of nursing practice years was one to 33. The mean score was 11.82 years.

Conclusion - Hypothesis V

Table 42 provides information on the years of nursing practice. As the five-year intervals were analyzed, it was noted that basically the Associate Degree nurse's career practice tends to decline in relation to the possible number of years of service. The pattern established by the Baccalaureate Degree programs was quite different.

There is a less gradual withdrawal from the profession by the Baccalaureate Degree respondents. Perhaps continued investment in education contributes to the commitment to one's profession. The pattern may in some way be influenced by continuing education for the Baccalaureate Degree faculty.

While the Chi-square value for nursing practice was found not to be significantly different, it was worth noting that the mean score number of years was higher for the Associate Degree respondents.

Hypothesis VI

The data in this section provide for the comparison of the years of teaching experience of the respondents of the Associate Degree programs and the Baccalaureate Degree programs involved in this study. Comparisons were based on the mean, the median and the Chi-square statistical technique.

Comparison Six: How similar are the years of teaching experience of the respondents of the Associate Degree programs and the Baccalaureate programs?

Null Hypothesis: There is no difference between the years of teaching experience of the respondents of the Associate Degree programs and the respondents of the Baccalaureate Degree programs.

Table 43 provides data, analyzed through the use of the mean and medium, for the number of nursing experience years.

Table 43. The years of teaching experience of the Associate Degree and Baccalaureate Degree respondents

	Mean	Median
Assoc	13.05	12.0
Bacca	13.98	12.0

The Chi-square was applied to test the hypothesis. In order to run the test, the years were grouped into five-year intervals. This interval was selected rather than a smaller or larger interval, believing the five-year grouping was more homogenous. The data are summarized in Table 44.

The null hypothesis was accepted. The Chi-square analysis data demonstrated teaching experience was independent of the degree ($\chi^2 = 3.06866$, $df = 5$, $P < 0.6894$). The number of years of teaching experience of the Associate Degree respondents and the Baccalaureate Degree respondents revealed no significant differences. The Associate Degree respondents largest interval (6-10) included 32.0%. The interval (11-15) rated second with 30.9%. The interval (0-5) ranked fourth

Table 44. Chi-square values for years of teaching experience

Variables		0-5	6-10	11-15	16-20	21-25	26-30	Row total
Assoc	#	11	31	30	12	6	7	97
	%	11.3	32.0	30.9	12.4	6.2	7.2	63.8
Bacca	#	6	17	15	6	8	3	55
	%	10.9	30.9	27.3	10.6	14.5	5.5	36.2
Column	#	17	48	45	18	14	10	152
Total	%	11.2	31.6	29.6	11.8	9.2	6.6	100.0

on the list. The range of years of teaching experience varied from one year to 29 years. The mean score was 13.05 years.

The interval (6-10) also contained the largest group (30.9%) for the Baccalaureate Degree respondents. The interval (11-15) was also the next largest with 27.3%. The first interval (0-5) also ranked fourth. The range of teaching experience years varied from one year to 35 years. The mean score was 13.98 years.

Conclusion

The years of teaching experience presents a similar pattern to the years of nursing practice for the respondents. The mean scores were close and there were no significant differences as determined by the Chi-square test. It was important to note that both groups had a considerable number of years of teaching experience, which should indicate some expertise in education.

CHAPTER V. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Discussion

Introduction

This study investigated the differences and similarities in the articulation activities as viewed by Associate Degree program and Baccalaureate Degree program respondents. More specifically, the study investigated the importance of each activity in promoting articulation and the extent to which each activity had been implemented within the Baccalaureate Degree programs. The study also sought to identify differences between Associate Degree and Baccalaureate Degree respondents' perceptions of articulation of the activities compared to the established minimum level.

For purposes of this study, articulation was defined as a planned process which facilitates the transition of students between the Associate Degree and the Baccalaureate Degree levels and makes possible the learning continuity defined as the process which embodies the notion of connectiveness and can be viewed as the flow from one institution to another and as the acceptability of the product which results.

Assumptions

There were four assumptions which were identified in this study. It was assumed that Associate Degree nurses were seeking advanced education in the field of nursing toward a Baccalaureate

Degree. It was assumed that, with the current trends in nursing, there would be an increased shortage of qualified nurses at the Baccalaureate Degree level. It was assumed that, based on the 1985 American Nurses' Association resolution, the public would demand nurses with a minimum of Baccalaureate Degree education. It was assumed that there was a high priority assigned to training faculty members and administrators for new Baccalaureate Degree programs.

The population studied included two and four-year schools of nursing located in nine Midwest states. A total of 161 nursing programs comprised the sample. Associate Degree survey questionnaires were received from 99 programs, accounting for 77.95% of those originally contacted. Baccalaureate Degree survey questionnaires were received from 62 programs, accounting for 74.69% of those originally contacted.

Data from the preceding sources were analyzed in a number of different ways. Information regarding the articulation activities of the two and four-year colleges were analyzed statistically through the use of the mean, standard deviation and the two-tailed student t test. Data concerning the respondents of the colleges were analyzed through the use of the mean, median and Chi-square.

Six null hypotheses were constructed to test differences between the two and four-year colleges of nursing in the nine-state area.

Findings have been summarized in terms of answers to questions posed in Chapter III. A summary of the results of the study is presented in this concluding chapter.

Conclusions

The findings and conclusions resulting from this study have direct application to the population within the identified target area. However, the methods used in arriving at the conclusion could serve as a prototype for other states desiring to ascertain their need for improved articulation between the Associate Degree and Baccalaureate Degree education programs for Registered Nurses.

Question One: How different are the mean articulation scores obtained by Associate Degree programs and Baccalaureate Degree programs in nursing education within the Midwest region identified?

Conclusion One; It is concluded that two and four-year nursing instructors recognize articulation as an issue which vitally affects ADN/RN students at the Baccalaureate Degree level.

The analysis of data in the study indicated that Associate Degree respondents and Baccalaureate Degree respondents participating in the study believed that counseling and advising services need to be provided for ADN/RN graduates who desire to enter four-year nursing programs.

The most important admission criterion indicated by the Baccalaureate Degree programs was the satisfactory completion of college courses. The majority of the four-year nursing programs would not accept all of the college credits from any of the disciplines, and only

31% would accept nursing courses already completed at the Associate Degree program level.

Perhaps one of the most important findings of this study was that the total group mean for importance rating was 5.0 or above for 23 of the 25 articulation activities identified within this study. The relative high ratings suggest that the respondents perceived the 23 identified activities would enhance articulation between Associate Degree and Baccalaureate Degree programs.

Conclusion Two: It is concluded that Associate Degree respondents recognize articulation as an important issue which vitally affects the graduates of their programs as they seek to continue education in four-year nursing programs. Articulation must be implemented to a greater extent to maximize the educational opportunities for persons electing to follow advanced career preparation.

Twelve of the articulation activities which ranked among the top 15 for importance ratings relate to the communication between Associate Degree and Baccalaureate Degree programs. Therefore, communication of various aspects of the institutional programs may be considered an important segment of the articulation process.

The mean for importance ratings were higher for Associate Degree respondents for 15 of the 25 articulation activities on the importance rating scale. Only 10 of the 25 articulation activities received a higher mean importance rating from Baccalaureate Degree respondents than from Associate Degree respondents. These findings indicate that

Associate Degree respondents are concerned about more activities than Baccalaureate Degree respondents relative to promoting articulation. However, it should be noted that many of these activities for which differences were observed relate more directly to Baccalaureate Degree programs than to Associate Degree programs and that Baccalaureate Degree programs would probably be more responsible for carrying out the activities if they were to be implemented.

The mean for implementation ratings were higher for Baccalaureate Degree respondents than for Associate Degree respondents for 19 of the 25 articulation activities on the implementation rating scale. Only six of the 25 articulation activities received a higher mean for implementation rating from the Associate Degree respondents than from Baccalaureate Degree respondents. A close observation of these differences suggests that Baccalaureate Degree respondents perceived that articulation activities are being conducted to a greater extent than the level of activity perceived by Associate Degree instructors.

The two-tailed student t test revealed five articulation activities as significantly different between the two groups for the importance of the activities. The means for importance ratings were significantly higher for Baccalaureate Degree respondents than for Associate Degree respondents for the activity, "Counseling service and advising are provided for ADN/RN graduates who desire to enter." This finding would suggest that in most situations Baccalaureate Degree instructors perceived this activity deserving of greater attention.

The Associate Degree respondents participating in the study

perceived the remaining four articulation activities were more important than the Baccalaureate Degree respondents. The mean for importance ratings was significantly higher for Associate Degree respondents than for Baccalaureate Degree respondents for the following activities: Utilize community college specialists in four-year nursing programs; involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum; utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs; and work jointly to provide in-service education.

Conclusion Three: It is concluded that Baccalaureate Degree respondents perceived that articulation activities are being implemented to a greater extent than do the Associate Degree respondents. Associate Degree respondents perceived greater assistance should be provided to students in determining where they are in the educational continuum and what they need to do to complete their educational goals.

The two-tailed student t test revealed five implementation activities as significantly different between the two groups for implementation of the activities. The mean implementation ratings were significantly higher for Baccalaureate Degree respondents than for Associate Degree respondents for the following activities: Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs; counseling service and advising are provided for ADN/RN graduates who desire to enter; provisions for testing out of

courses offered in the third and fourth-year curriculum; develop an advanced curriculum that is flexible to allow for variations among students; and notify community college curriculum directors of changes made in the four-year nursing programs.

Conclusion Four: It is concluded that Associate Degree Registered Nurses are required to repeat a number of college courses from each discipline including nursing. Baccalaureate Degree respondents perceive this repetition as necessary to insure quality preparation for the practice of professional nursing.

Question Two: How different are the mean articulation scores obtained from Associate Degree programs' mean scores on the articulation scale from the established minimum score required to be considered an acceptable level of articulation?

Conclusion: It is concluded that Associate Degree respondents, according to their perceptions, were not satisfied with the rate of implementation for the majority of the articulation activities.

The findings of this section of the study indicated that Associate Degree respondents participating in the study perceived the importance rating for 22 of the 25 articulation activities are significantly different than the minimum acceptance level of 5.0 set by the committee of experts. Twenty-two of the activities were found to be more important than the established minimum acceptance level. The findings indicate that Associate Degree instructors consider the

articulation activities as necessary for their graduates.

The mean implementation ratings provided by the Associate Degree respondents were significantly different compared with the established 5.0 level of acceptance set by the committee of experts for 23 of the 25 activities included in the implementation rating questionnaire.

The Associate Degree instructors found 20 of the implementation activities had not been implemented and three had been implemented.

Question Three: How different are the mean articulation scores obtained by Baccalaureate Degree programs' mean scores on the articulation scale from the established minimum score required to be considered an acceptable level of articulation?

Conclusion One: It is concluded that Baccalaureate Degree instructors must determine the articulation activities that are important if ADN/RN graduates are to be encouraged into their programs of nursing.

The findings of this section of the study suggest that Baccalaureate Degree respondents participating in the study believe that the importance rating for 20 of the 25 articulation activities were significantly different from the established minimum acceptance level of 5.0 set by the committee of experts. Nineteen of the activities were found to be more important and one of the activities to be less important.

Conclusion Two: It is concluded that Baccalaureate Degree instructors perceived articulation activities as not implemented and also not necessary to implement.

The mean implementation ratings provided by the Baccalaureate Degree respondents were significantly different from the established 5.0 level of acceptance. Fourteen of the activities were not being implemented.

Question Four: How different is the academic preparation of the respondents of the Associate Degree programs from the respondents of the Baccalaureate Degree programs?

The null hypothesis was rejected. There was a significant difference in the academic preparation of the Association Degree respondents and the Baccalaureate Degree respondents. Whereas the academic preparation of both groups was lower than would be expected in institutions of higher learning, many more Associate Degree respondents had lower educational levels.

Conclusion One: There is a lack of academic preparation on the part of the Associate Degree respondents. This could account for the reluctance of the Baccalaureate Degree programs to accept suggestions for educational program changes from Associate Degree respondents. Apparently they do not perceive Associate Degree instructors as having a sufficient educational background to offer recommendations for changes that would be beneficial to Baccalaureate Degree programs.

Conclusion Two: There is a lack of professional educators with advanced degrees in the field of nursing to fill the numerous faculty positions that exist in both two and four-year nursing programs.

One of the goals of the study was to discern the kind of responsibilities of the individual who responded to the questionnaire. The survey indicated that 97.9% of the Associate Degree and 90.9% of the Baccalaureate Degree respondents had positions of responsibility and authority in each of their respective programs. This fact was important to lend credibility to the study.

Question Five: How different is the range, in years, of nursing experience of the respondents of the Associate Degree programs from the respondents of the Baccalaureate Degree programs?

Conclusion One: It is concluded that years of nursing experience were similar; however, the Baccalaureate Degree respondents had greater job retention. This fact would further suggest more satisfaction and commitment to the profession.

The null hypothesis was accepted. The findings of the data indicated there was no significant difference in the years of nursing practice between the two groups. It was worth noting that there was a difference in the pattern of years of service by the two groups. The Associate Degree respondents' years of nursing practice tended to decline with the expected number of years of professional service, whereas, the pattern established by the Baccalaureate Degree

respondents reflected a greater retention, particularly after the first five years. The irregular pattern established by the Baccalaureate Degree respondents may, in part, result from their interrupted periods of service to progress in academic preparation.

Question Six: How different is the range, in years, of teaching experience of the respondents of the Associate Degree programs from the respondents of the Baccalaureate Degree programs?

Conclusion One: It is concluded that years of teaching experience were similar. The greatest attrition appeared in the first five years, but once the nurse educators got beyond the fifth year they tended to remain in teaching for more than ten years. These findings would indicate that both groups had an adequate number of years of teaching experience.

The null hypothesis was accepted. The years of teaching experience presents a similar picture to the years of nursing practice for the respondents. Both groups had a higher percent remaining in teaching for the 6-10 year interval and a second highest percent for the 11-15 year interval. The mean scores for both groups were extremely close, 13.05 years and parallel for each five-year interval for Associate Degree programs and 13.98 years for Baccalaureate Degree programs.

Summary of conclusions

1. Two and four-year nursing respondents recognize articulation as an issue which vitally affects ADN/RN students at the Baccalaureate Degree level.
2. Associate Degree respondents recognize articulation as an important issue which vitally affects the graduates of their programs as they seek to continue education in four-year nursing programs.
3. Baccalaureate Degree respondents perceive that articulation activities are being implemented to a greater extent than do the Associate Degree respondents.
4. It is concluded that ADN/RN students are required to repeat a number of college courses from each discipline, including nursing.
5. Associate Degree respondents, according to their perceptions, were not satisfied with the rate of implementation for the articulation activities.
6. Baccalaureate Degree instructors must determine the articulation activities that are important if ADN/RN graduates are to be encouraged into their programs of nursing.
7. The lack of academic preparation on the part of the Associate Degree respondents could account for the reluctance of the Baccalaureate programs to accept suggestions for educational program changes from Associate Degree respondents.

8. The years of nursing practice were similar; however, the Baccalaureate Degree respondents had greater job retention.
9. The years of teaching experience were similar. Both groups of nurses tend to remain in teaching for more than ten years once they get beyond the fifth year.

Implications

Associate Degree/Registered Nurses continue to be faced with numerous problems upon their return to school in pursuit of advanced nursing degrees. These problems tend to discourage and direct some students to alternate paths that are not readily recognized by the nursing profession.

These nontraditional Baccalaureate Degree programs are generally of two types: (1) a Baccalaureate Degree program in nursing that consists of an Associate Degree plus two years of college instruction with little or no upper-division college work in nursing, and (2) a Baccalaureate Degree program that enables the Registered Nurse to receive two or more years of credit for an Associate Degree education and to earn a degree in a discipline other than nursing (e.g., Biology, Psychology, or Sociology). Although preparation for greater job opportunities and career mobility is supposed to be one of the purposes of these programs, the truth is that graduates of these programs may have increased their general education, but they do not have the preparation needed for many Baccalaureate Degree-level

positions in nursing. Also, they do not have the base needed for graduate study in nursing.

In view of these facts, there are several implications for nursing as a consequence of the study. First, the alternatives of the educational process need to be identified. In so doing, the professional may wish to foster pluralism in the types of programs, providing more and greater opportunities for the ADN/RN to undertake continued education in nursing. Second, the long-range effects of diversity in nursing education need to be studied. With continued development and refinement of tools to measure nursing practice, more specific performance outcomes can be correlated with individual differences as well as program differences. Third, if characteristics can be identified as predictors of nursing performance, measures to provide counseling for ADN/RN's who desire further education should be undertaken.

Recommendations

Four facts prompted this study:

1. Registered nurses assumed they could automatically enter a four-year nursing program and receive credits for their basic nursing courses. The fact is, because of the policies of our current educational systems, these courses must be either repeated or challenged by examination in order to receive college credit.
2. Acceptance into many Baccalaureate Degree nursing programs was affected by the number of slots available. The fact is the

individual's qualifications or number of courses already completed does not guarantee priority.

3. The nursing educational system was not set up to recognize the status of practicing ADN/RN by providing easy access to Baccalaureate Degree programs. With the articulation of these two kinds of collegiate programs, we can move toward the resolution of educational barriers in nursing education.
4. The need exists for two and four-year colleges to look at the accommodation of nontraditional programs and for strengthening institutional integrity and improvements of communication among institutions.

Recommendations for nursing

The results of this study have identified areas which require further study. It is doubtful that avoidance of the articulation process will be possible for many more years for two reasons: articulation problems are identified as an educational consumer issue, and society's concern for lifelong learning and re-education. Therefore, the following are suggested areas for further research.

1. It is recommended that the Baccalaureate Degree nursing curriculum clearly differentiate lower level and upper level nursing courses.
2. Registered Nurse students should be allowed to test out in upper division clinical nursing courses and, if they are successful, to receive credit.

3. An instrument should be developed that will accurately measure levels of nursing competence, so that the competence of Registered Nurses can be adequately assessed for entering levels of ability within the Baccalaureate Degree program.
4. College credit should be awarded to Registered Nurses who can demonstrate their nursing competencies on written and/or skill performance examinations.
5. The Baccalaureate Degree nursing curriculum should be further evaluated so that career mobility for the Registered Nurse can be facilitated.
6. Exploration of the significant factors contributing to the obvious drop in the number of Registered Nurses failing to achieve advanced placement at the four-year colleges of nursing should be undertaken.
7. The use of educational technology, challenging examinations, modules, and competency-based instruction has made learning more reality-oriented and beneficial; these efforts need to be continued and expanded.
8. Articulated four-year nursing programs should be expanded. Programs that include nontraditional study as well as the more usual or traditional methods of study should be encouraged.

9. Replication of this study is encouraged. Different levels of education and other geographical areas should be investigated.

Summary

The movement of the Associate Degree Registered Nurse into the Baccalaureate Degree nursing program requires the understanding that the achievement of the Baccalaureate Degree program objectives is dependent on two major factors: The motivation and sincerity of the Registered Nurse to reorient her philosophy and behavior in nursing, and the quality of the programs and the sensitivity of faculty to the student's needs and experiences. Despite all appearances to the contrary, many educators eagerly support the efforts of RN's to improve their academic standing. The nursing profession desperately needs nurses who are motivated, committed to continued learning, and attuned to the profession's expanding goals.

As the twenty-first century moves closer, the nursing professional needs to create not only the supportive philosophy but also the pragmatic systems to build a society in which lifelong learning is the norm, past education and experience are valued and used as a foundation, and any method is acceptable as long as the expected learning competencies are achieved. All types of nursing education programs have a tremendous responsibility to prepare nurses capable of functioning in this complex, constantly changing, and demanding society.

It should be possible for many nurses, initially prepared for one

level in nursing and motivated to seek additional preparation, to move through the educational system for new learning without undue repetition and hardship. When learning is the goal, the where, when, how and by whom questions all may have diverse and alternative answers. But the benefits derived from having more capable nurses at all levels would seem to outweigh the sometimes superficial barriers that hinder learning by the experienced Associate Degree/Registered Nurse student.

The main pressure upon nursing education today, then, is to be accountable to the students in every sense of the word, to provide them with an education of high quality and one that will meet both their needs and those of society. This is the principle that must underlie planning for all new programs as well as modifications in established ones of all types and on all levels.

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APPENDIX A: QUESTIONNAIRES

Associate Degree Questionnaires

PART II

Directions: Please respond to each of the following items related to articulation between two-year and four-year nursing programs. In the Importance Rating column, indicate how important you feel the activity is in promoting articulation. In the Level of Implementation column, indicate the extent you feel the activity has been implemented within your College. Please use the following scale for each item.

1	2	3	4	5	6	7	8	9
Low				Average				High

<u>Activity</u>	<u>Importance Rating</u>	<u>Level of Implementation</u>
Example: Define and communicate the role of two-year nursing programs and four-year nursing programs.	<u>7</u>	<u>5</u>
1. Exchange program and curricula information.	_____	_____
2. Use public relations materials to keep ADN/RN informed about the four-year nursing programs.	_____	_____
3. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.	_____	_____
4. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.	_____	_____
5. Counseling service and advising are provided for ADN/RN graduates who desire to enter.	_____	_____
6. Conduct articulation meetings on area community college basis.	_____	_____
7. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs	_____	_____
8. Foster professional development conferences for faculty from community colleges and universities.	_____	_____
9. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.	_____	_____
10. Utilize community college specialists in four-year nursing programs.	_____	_____
11. Follow-up of placement of two-year and four-year nursing graduates.	_____	_____
12. Provisions for testing out of courses offered in the third and fourth year curriculum.	_____	_____
13. Develop an advanced curriculum that is flexible to allow for variations among students.	_____	_____

14. Develop a communication procedure with community college counselors. _____
15. Develop a program to identify prospective students for all career ladder levels in nursing. _____
16. Provide educational programs for students with special needs. _____
17. Determine educational needs through community survey and other available information. _____
18. Work jointly with community colleges to identify clinical experience centers. _____
19. Notify community colleges' curriculum directors of changes made in the four-year nursing program. _____
20. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum. _____
21. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs. _____
22. Work jointly to provide inservice education. _____
23. Invite two-year nursing instructors and counselors to visit four-year nursing instructors. _____
24. Send pertinent information to students' former instructors. _____
25. Provide inservice education for two-year nursing instructors by four-year nursing instructors. _____

PART III

Directions: Please answer each question. Where there are dashes, mark an "X" by the response which best describes your situation. Where a line is provided, write your response.

1. What is your position? _____
2. How many years have you been in your current position? _____
3. What is your highest educational degree? _____
 _____ Bachelor's degree
 _____ Master's degree
 _____ Ph.D. degree
4. How many years of teaching experience do you possess? _____
5. How many years of nursing practice experience do you presently have? _____

Baccalaureate Degree Questionnaires

198
SURVEY OF ARTICULATION AND EDUCATIONAL TRENDS

PART I

Directions: Please provide the information requested for each item by marking the appropriate choice or providing a short answer in the appropriate spaces.

1. The type of nursing program offered by your college provides admission for:

☐ High School Graduates
☐ Transfer Students
☐ Registered Nurses

2. The nursing program has National League of Nursing accreditation?

☐ Yes
☐ No

3. Highest degree offered in nursing by your institution:

☐ BSN
☐ Masters
☐ Doctorate
☐ Other

4. Total number of students enrolled:

☐ Number of Pre-nursing Students
☐ Number of Generic Students
☐ Number of RN Students from Associate Degree Program

5. Type of Financial Aid available to students: (check all that apply)

☐ Federal Grant
☐ Student Loan
☐ Nursing Scholarship
☐ Other

6. Nursing scholarships are offered:

☐ Yes
☐ No

If yes, in 1979 the:

☐ Number of Students Receiving
☐ Amount Given/Scholarship
☐ Number Generic Students
☐ Number ADN-RN Students Receiving
☐ Number Diploma RN Students Receiving

7. Classes offered at non-traditional hours: (check all that apply)

- ☐ Weekend Classes
- ☐ Weekend Nursing Care Classes
- ☐ Evening Classes
- ☐ Evening Nursing Care Classes

8. Minimum requirements of acceptance for RN students: (check all that apply)

- ☐ ACT
- ☐ SAT
- ☐ State Board Score Results
- ☐ Previous Nursing School Grade Point
- ☐ Interview
- ☐ Satisfactory Practice Ability
- ☐ Satisfactory Completion of College Courses

9. Type of academic credit offered by your institution:

- ☐ Quarter Hours
- ☐ Semester Hours

10. The college accepts transfer credit for previously taken nursing classes by ADN's:

- ☐ Yes
- ☐ No

If yes, how many credits will be accepted:

- ☐ 0 - 5
- ☐ 6 - 10
- ☐ 11 - 15
- ☐ 16 - 20
- ☐ 21 - 25
- ☐ 26 - 30
- ☐ 31 and above

11. The nursing program awards credit or advanced placement for previous experience?

- ☐ Yes
- ☐ No

If yes, what is the method for giving credit? (check all that apply)

- ☐ State Board Score
- ☐ Transcript
- ☐ Employment Record
- ☐ Assessment of Nursing Care Skills
- ☐ Interview
- ☐ CEEB/CLEP
- ☐ NLN Graduate Nurse Examination
- ☐ NLN Achievement Tests
- ☐ Teacher-Made Exams (challenge)
- ☐ Nursing Core Final Exams (same as given to generic student)

12. How many nursing credits will be required to complete the Baccalaureate degree? _____
 How many nursing credits will you accept from the ADN/RN program? _____
13. How many communications credits will be required to complete the Baccalaureate degree? _____
 How many communications credits will you accept from the ADN/RN program? _____
14. How many social science credits will be required to complete the Baccalaureate degree? _____
 How many social science credits will you accept from the ADN/RN program? _____
15. How many science credits will be required to complete the Baccalaureate degree? _____
 How many science credits will you accept from the ADN/RN program? _____
16. How many humanities credits will be required to complete the Baccalaureate degree? _____
 How many humanities credits will you accept from the ADN/RN program? _____
17. How many mathematics credits will be required to complete the Baccalaureate degree? _____
 How many mathematics credits will you accept from the ADN/RN program? _____
18. The number of RN students attempting to receive advanced placement:
- | | |
|-------|------|
| _____ | 1980 |
| _____ | 1979 |
| _____ | 1978 |
| _____ | 1977 |
| _____ | 1976 |
19. The number of RN's actually receiving advanced placement:
- | | |
|-------|------|
| _____ | 1980 |
| _____ | 1979 |
| _____ | 1978 |
| _____ | 1977 |
| _____ | 1976 |

20. Maximum time student could potentially save by taking advanced placement tests:

☐ 1st Semester
☐ 2nd Semester
☐ 3rd Semester
☐ 4th Semester
☐ 5th Semester

21. Most common problems encountered by the RN students: (check all that apply)

☐ Counseling Time
☐ Financial Aid
☐ Class Scheduling
☐ Home Responsibilities
☐ Program Planning for Part-time Students
☐ Availability of Clinical Facilities
☐ Other _____

22. Generic and Registered Nursing students in the same program is advantageous:

☐ Yes
☐ No
☐ Explain: _____

23. Does your institution anticipate any difficulty with the 1985 resolution of utilizing 2 and 4-year programs of education?

☐ Yes
☐ No
☐ Explain _____

24. If this resolution is mandated, do you anticipate increased enrollment?

☐ Yes
☐ No

If yes, indicate potential problems: (check all that apply)

☐ Lack of Qualified Instructors
☐ Lack of Clinical Facilities
☐ Other (explain) _____

25. Does your state mandate accessibility to educational opportunities?

☐ Yes
☐ No

PART II

Directions: Please respond to each of the following items related to articulation between two-year and four-year nursing programs. In the Importance Rating column, indicate how important you feel the activity is in promoting articulation. In the Level of Implementation column, indicate the extent you feel the activity has been implemented within your College. Please use the following scale for each item.

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3. Have identified competencies needed by ADN/RN students to enter the four-year nursing programs.	_____	_____
4. Utilize planned active recruitment among the ADN/RN graduates to pursue four-year nursing programs.	_____	_____
5. Counseling service and advising are provided for ADN/RN graduates who desire to enter.	_____	_____
6. Conduct articulation meetings on area community college basis.	_____	_____
7. Encourage core curriculum in two-year programs to enhance the articulation process with four-year programs	_____	_____
8. Foster professional development conferences for faculty from community colleges and universities.	_____	_____
9. Encourage utilization of guest lecturers from four-year nursing programs in ADN/RN programs.	_____	_____
10. Utilize community college specialists in four-year nursing programs.	_____	_____
11. Follow-up of placement of two-year and four-year nursing graduates.	_____	_____
12. Provisions for testing out of courses offered in the third and fourth year curriculum.	_____	_____
13. Develop an advanced curriculum that is flexible to allow for variations among students.	_____	_____

14. Develop a communication procedure with community college counselors. _____
15. Develop a program to identify prospective students for all career ladder levels in nursing. _____
16. Provide educational programs for students with special needs. _____
17. Determine educational needs through community survey and other available information. _____
18. Work jointly with community colleges to identify clinical experience centers. _____
19. Notify community colleges' curriculum directors of changes made in the four-year nursing program. _____
20. Involve nursing instructors from two-year nursing programs in revision of four-year nursing curriculum. _____
21. Utilize two-year nursing instructors to help evaluate and recommend directions in four-year nursing programs. _____
22. Work jointly to provide inservice education. _____
23. Invite two-year nursing instructors and counselors to visit four-year nursing instructors. _____
24. Send pertinent information to students' former instructors. _____
25. Provide inservice education for two-year nursing instructors by four-year nursing instructors. _____

PART III

Directions: Please answer each question. Where there are dashes, mark an "X" by the response which best describes your situation. Where a line is provided, write your response.

1. What is your position? _____
2. How many years have you been in your current position? _____
3. What is your highest educational degree? _____
 _____ Bachelor's degree
 _____ Master's degree
 _____ Ph.D. degree
4. How many years of teaching experience do you possess? _____
5. How many years of nursing practice experience do you presently have? _____

APPENDIX B: LETTERS

First Letter to Colleges

Iowa State University of Science and Technology Ames, Iowa 50011



College of Education
Industrial Education
Telephone 515-294-1033

Dear Dean/Director:

Presently, I am writing a dissertation that I believe has significant relevance for Health Occupations Educators of Associate Degree Nursing programs. The title is The Articulation and Educational Trend for Associate and Baccalaureate Nursing Degree. The information obtained from this study will be of importance to educators who are presently involved in the preparation of Registered Nurses who aspire to continue their education upward to the baccalaureate degree.

The investigation is concerned with determining the process and requirements for Registered Nurses from Associate Degree Nursing programs to progress to the baccalaureate level. The population will be two and four-year colleges in the midwest.

This study is a major part of my Doctoral program at Iowa State University and is being conducted under the direction of the Department of Industrial Education, Iowa State University. Would you be so kind as to assist me? Please complete and return the enclosed questionnaire today. Confidentiality will be maintained through the use of randomly applied codes of the questionnaire.

Thank you very much for your consideration and cooperation.

Sincerely,

William D. Wolansky
Dr. William D. Wolansky
Professor and Head
Department of Industrial Education
Iowa State University

Beverly Nelson
Beverly J. Nelson, R.N., M.S.
Coordinator Health Occupations
Marshalltown Community College

Enclosure

BJN/og

Second Request Letter to Colleges

Iowa State University of Science and Technology Ames, Iowa 50011



College of Education
Industrial Education
Telephone 515-294-1033

Dear Dean/Director:


Recently I wrote to your university requesting your assistance in a study that I believe has significant relevance for Health Occupations Educators of Associate Degree Nursing programs. The title is The Articulation and Educational Trend for Associate and Baccalaureate Nursing Degree. The information obtained from this study will be of importance to educators who are presently involved in the preparation of Registered Nurses who aspire to continue their education upward to the baccalaureate degree.

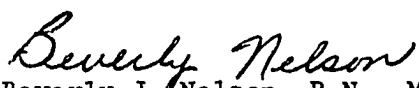
The investigation is concerned with determining the process and requirements for Registered Nurses from Associate Degree Nursing programs to progress to the baccalaureate level. The population will be two and four-year colleges in the midwest.

This study is a major part of my Doctoral program at Iowa State University and is being conducted under the direction of the Department of Industrial Education, Iowa State University. Would you be so kind as to assist me? Please complete and return the enclosed questionnaire by November 15, 1980. Your input is vital and necessary to the outcome of this research.

Thank you very much for your consideration and cooperation.

Sincerely,


Dr. William D. Wolansky
Professor and Head
Department of Industrial Education
Iowa State University


Beverly J. Nelson, R.N., M.S.
Coordinator Health Occupations
Marshalltown Community College

Enclosure

BJN/og